USE OF SELF-ACTUALIZATION SCALES AS A PREDICTOR OF ACADEMIC SUCCESS WITH UNDERACHIEVERS

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by

Christina W. Mitchell

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An abstract of a Dissertation by
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August 1974
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The problem. Drake University placement officers do not know with any degree of certainty whether or not students selected for the Transitional Services Program can earn a first-semester 2.0 grade point average (GPA), which is a requirement for their admission to the University. The currently-used ACT-prediction method (a computation provided by American College Testing Service using the student's high school GPA, ACT or SAT score, and a correction factor for the specific university) does not use scores of Time-Competence or Inner-Directedness scales from the Personal Orientation Inventory (POI) as indices of academic success. Yet, the implication is that a relationship exists between these variables and academic success or failure.

The problem, then, was to determine whether POI scale pre-test scores could more accurately be used as predictors of first semester GPA's than is the ACT-prediction method. The second problem was to investigate the existence and degree of relationship between the POI major scale post-test scores, compared separately (a standardized measure of self-actualization) and actual GPA (evidence of behavior associated with self-actualization).

Procedure. In the fall of 1973, 102 students were enrolled in the Transitional Services Program (TSP), a special-help program provided for students whose high school grades, ACT or SAT scores and/or class rank or a combination of these, prevents their admission to Drake. The TSP provides and requires participation in both a speed reading and study skills course, English I, other courses to total 10 hours or more, and regular individual counseling. At the end of the first semester, the student must have earned a 2.0 GPA to gain admission to the University.

The sample consisted of 102 students currently enrolled in the TSP. Data were compiled from three sources--POI pre- and post-tests (given at the beginning and at the end of the semester), the ACT-predicted GPA (computed prior to the beginning of the semester), and the actual GPA (computed at the end of the semester). Pearson Product-Moment correlations were calculated for the total group and for each sex between:

1. ACT-predicted GPA and actual GPA.
2. Pre-test scores on each major- and sub-scale of the POI and actual GPA.

3. Post-test scores on each major scale of the POI and actual GPA.

Comparison was then made between the magnitude of the error of prediction using POI scale pre-test scores, the ACT-prediction method error of prediction, and the standard deviation of the actual GPA's to determine which was the smallest, and thus, was the best predictor.

Findings. Compared to the ACT-method, neither of the POI major scales was a better predictor of first semester GPA. One correlation reached significance ($p < .05$) for males (Synergy, $r=.26955$) and one for females (Self-Regard, $r= -.33354$). For males, the ACT-predicted GPA had the higher correlation with actual GPA ($r=.45170$). For females, the sub-scale, Self-Regard, was a better predictor than was the ACT-prediction method, which did not reach a significant level ($r=.09415$).

Conclusions. The Self-Regard sub-scale could be tried as a potentially better predictor for TSP females. The POI major scales are without value for predictive purposes in the TSP. No claim can be made that self-actualization as measured by the POI is related to GPA. No given set of variables can be used for prediction for both sexes. Though the ACT-prediction method had the highest correlation with GPA, a high level of confidence in it as a predictor can not be justified. Thus a continued search using different variables is indicated.

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CHAPTER I

INTRODUCTION

Though the societal prescription for success in the adult world may have altered somewhat in very recent years, a college education for one's children continues to be the aspiration of the majority of American parents.[1] As families progress upward in the business, social, and financial worlds there is a commensurate but subtle requirement of the offspring to enroll and succeed in college.[2] Parental success and college for the children have become a natural dyad. This increase in emphasis on higher education is pleasing to the educator, aspiring parent, and achieving student. But, what about the underachieving, undermotivated, or otherwise marginal student? The familiar "success breeds success" is gratifying to the achiever but an indictment to the student who has found school to be difficult, uninspiring, or otherwise minimally rewarding.

The university community, in spite of the academic demands inherent in it, offers a new setting, a new freedom,

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[1] R. W. Pitcher and B. Blaushild, Why College Students Fail (New York: Funk & Wagnalls, 1970), p. 5.

[2] Ibid., p. 138.

which may be an overwhelmingly pleasant but lethal gift in the hands of the unprepared student.[1]

Many studies have been conducted to determine which distractions, personal associations, skill deficiencies, familial aberrations, or personal limitations contribute to collegiate academic demise.[2] None has provided an exhaustive list of liabilities. Conversely, studies to isolate a reliable predictor of success are legion, but they, too, have failed to provide accurate, consistent prediction of college success.[3]

Current economic trends, societal indecision as to the wisdom of a college education for everyone, and other factors have reduced enrollments and consequently have forced university planners to provide help to the incoming freshmen who would not previously have been considered for admittance. And, once admitted, for economic and empathic reasons, college personnel are not content to let these students fail-out.

Transitional Services Program (hereafter referred to

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[1]John Levy and Ruth Munroe, "The Adolescent and His Happy Family," The Adolescent, A Book of Readings, ed. J. M. Seidman (New York: Holt, Rinehart & Winston, 1960), p. 392.

[2]L. L. Baird, "Predictions of Accomplishments in College: A Study of Achievement," Journal of Counseling Psychology, (1970), 246-253.

[3]Ibid.

as TSP) is a program designed by Drake University personnel to offer an opportunity for college enrollment to students who because of low high school class rank, low high school grade point average (GPA), low ACT or SAT scores, or a combination of these would otherwise be denied this privilege. Courses in speed reading, study skills, English I (which includes weekly conferences with the instructor), one or two electives, and regularly scheduled weekly or bi-weekly counseling conferences are all part of the program. At the end of the first semester or summer session, a student must have earned a 2.0 GPA to achieve admittance to Drake University. Of a total of 236 students, 201 (85 percent) have been admitted, since the program's inception in 1969.

While no truly reliable method has been used for identifying those students most apt to have academic success (2.0 GPA), according to Baird, past achievement is the best predictor of future achievement.[1] American College Testing Service develops a predicted college GPA (hereafter referred to as the ACT-predicted GPA) using a computation from the student's high school grade point average, ACT or SAT composite, and a correction factor for the specific university. This method, however, has failed to provide an accurate predictor of a student's academic performance in the TSP.

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[1]Baird, loc. cit; Pitcher and Blaushild, op. cit., p. 24.

Kathryn Jennings, a graduate student in Drake's College of Business, completed a study of the 1972 TSP students' predicted and actual GPA's which depicts the discrepancies of the predicted and actual GPA. Following are her findings:

	N	Mean
Students in the TSP	101	
Predicted GPA for the total number		1.29
Predicted GPA for males	71	1.21
Predicted GPA for females	30	1.48
Actual GPA for total number	101	2.33
Actual GPA for males	71	2.27
Actual GPA for females	30	2.48[1]

Eighty-five percent of all of the students in TSP (236 in total) have earned a 2.0 GPA despite the fact that their ACT-predicted GPA's have been below a 2.0 GPA. Thus, the concern is to find a more accurate predictor.

RATIONALE FOR THE STUDY

Drake University placement officers do not know with any degree of certainty whether or not students selected for TSP can earn a 2.0 GPA the first semester. They do not wish

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[1]Kathryn Jennings, "An Analysis of the Academic Performance of the Summer and Fall, 1973, Transitional Services Program" (unpublished undergraduate report made at Drake University, Des Moines, Iowa, 1973).

to place students in another situation in which they are apt to fail. The use of standardized predictive indices other than are currently used (ACT-prediction method) could aid admissions officers in their selection and placement of students in the TSP who would be most apt to succeed.

The currently used ACT-prediction method does not use scores of Time-Competence or Inner-Directedness scales from the Personal Orientation Inventory (hereafter referred to as the POI) as indices of academic success. Yet Pitcher and Blaushild have implied that a relationship exists between Time-Competence and/or Inner-Directedness and a student's predisposition for academic success or failure.[1]

PURPOSE OF THE STUDY

The purpose of this study was to investigate whether or not a significant relationship exists between POI Time-Competence and/or Inner-Directedness scale scores at the beginning or the end of the first semester and actual GPA's, or both.

STATEMENT OF THE PROBLEM

The problem, then, was to determine whether POI scale pre-test scores could more accurately be used as predictors of first semester GPA's than the ACT-prediction method.

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[1]Pitcher and Blaushild, op. cit., p. 5.

The second problem was to investigate the existence and degree of relatedness between either of the POI major scale post-test scores (a standardized measure of self-actualization), and actual GPA (evidence of behavior associated with self-actualization).

NULL HYPOTHESES

Four null hypotheses were generated for examining the possible utility of the POI major scale scores. Two of these concern the predictive value of the POI major scale scores of Time-Competence and Inner-Directedness for students' first semester GPA's. The other two examine the relatedness between grades earned and post-test scores of Time-Competence and Inner-Directedness.

1. The relationship between the POI Time-Competence major scale pre-test score and actual GPA is not higher than the relationship between the ACT-predicted and actual GPA.

2. The relationship between the POI Inner-Directedness major scale pre-test score and actual GPA is not higher than the relationship between the ACT-predicted and actual GPA.

3. There is no significant relationship between post-test scores of the POI Time-Competence scale and actual GPA's.

4. There is no significant relationship between post-test scores of the Inner-Directedness scale and actual GPA's.

LIMITATION OF THE STUDY

Although many special-help programs (such as TSP) exist on college and university campuses across the nation, each has been developed to meet the needs of the students at a particular setting. Additionally, each year the group of TSP students can be expected to possess a slightly different collection of characteristics. Therefore, gross generalizations from the results of this study should be avoided.

DEFINITIONS

Time-Competence

The time competent person lives in the "here-and-now," appreciating both the past and future and relating them to the present. He is relatively freer from guilts, regrets, and resentments from the past than is the non-self-actualizing person.[1]

An adolescent's ability to anticipate the future (to imagine what will happen in it) and to plan for it manifests itself in the form of career plans and shows a realistic appreciation of past accomplishments and present activities, which engender goals for the future.[2] The widening of life

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[1] E. L. Shostrum, Manual, Personal Orientation Inventory (San Diego: Educational and Industrial Testing Service, 1966), p. 5.

[2] A. T. Jersild, The Psychology of Adolescence (London: Macmillan Co., 1963), p. 8.

space into unknown regions concerns not only geographic and social surroundings but also the time dimension. All people are influenced by the manner in which they perceive the future and relate it to present activities and earlier experiences. Fundamental to development is the degree to which one can plan and discipline self to structure the time perspective for the achievement of realistic ideal goals or values.[1] Anticipation of gratification renders acceptable to the student his present denial of gratification.[2]

Inner-Directedness

One component of self-actualization is the degree to which one responds to internalized principles and motivations.[3] As Maslow has stated: "The person, insofar as he is a real person, is his own main determinant. Every person is, in part, 'his own project' and makes himself."[4] A person who is inner-directed responds primarily to his own values, needs,

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[1]Kurt Lewin, "The Field Theory Approach to Adolescence," op. cit., p. 38.

[2]Pitcher and Blaushild, loc. cit.

[3]Ibid., p. 32; J. W. Lieb and W. U. Snyder, "Effects of Group Discussions on Underachievement and Self-Actualization," Journal of Counseling Psychology, XIV (1967), 282-285.

[4]A. Maslow, Toward a Psychology of Being (Princeton, New Jersey: D. Van Nostrand, 1968), p. 193.

and feelings. The greatest control of his behavior comes from within.

Shostrum describes the inner-directed person as one who

> . . . appears to have incorporated a psychic 'gyroscope' which is started by parental influences and later on is further influenced by other authority figures. The inner-directed man goes through life apparently independent, but still obeying this internal piloting. The source of inner-direction seems to be implanted early in life and the direction is guided by a small number of principles. The source of direction for the individual is inner in the sense that he is guided by internal motivations rather than external influences. This source of direction becomes generalized as an inner core of principles and character traits.[1]

Ten measurable characteristics of inner-directedness are as follows:[2]

Self-actualization	Holds values of self-actualizing people
Existentiality	Flexible in application of values
Feeling Reactivity	Sensitive to own needs and values
Spontaneity	Expresses feelings behaviorally
Self-regard	Has high self-worth
Self-acceptance	Accepting of self in spite of weaknesses
Nature of Man, Constructive	Sees man as essentially good

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[1]Shostrom, op. cit., p. 17.

[2]Ibid., p. 10.

Synergy	Sees opposites of life as meaningfully related
Acceptance of Aggression	Accepts feelings of anger or aggression
Capacity for Intimate Contact	Has warm interpersonal relationships

Other-Directedness

Other-directedness, at the opposite end of the continuum, primarily reflects the influence of friends and other external forces to which the person responds.

Pitcher and Blaushild have identified some of the variables which may lead to academic failure and which suggest a high level of other-directedness:

1. Dependence on external stimulation for motivation for completing educational tasks.
2. The 'You teach it to me' instead of the 'I have to learn it' attitude.
3. Excessive need for peer approval and acceptance.[1]

The person who is other-directed lacks confidence in his own judgment of what is best for him.

> The other-directed person appears to have been motivated to develop a radar system to receive signals from a far wider circle than just parents. The boundary between the familial authority and other external authorities breaks down. The primary control feeling tends to be fear or anxiety of the fluctuating voices of school authorities or the peer group. There is a danger that the other-directed person may become over-sensitive to 'others' opinions in matters of external conformity. Approval of others becomes for him the highest goal. Thus, all power is invested in

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[1]Pitcher and Blaushild, op. cit., pp. 94-103.

> the actual or imaginary, approving group. Manipulation in the form of pleasing others and insuring constant acceptance, becomes his primary method of relating. Thus, it can be seen that the original feeling of fear can be transformed into an obsessive, insatiable need for affection or reassurance of being loved.[1]

Self-Actualization

The person who is at the optimum level of self-actualization is between the extreme inner-directed and other-directed person and is less dependency- or deficiency-oriented than either of the extremes. He is autonomously self-directed, yet he is other-directed to the degree that he is sensitive to others' approval, affection, and good-will.[2] By contrast, the underachiever has been found to have a low self-concept.[3] It thus follows that he may have doubts concerning his ability to be self-directed, will seek direction from others to a greater extent than does the achieving student, and consequently be less self-actualizing.

A self-actualizing person also possesses a level of time-competence which allows him to make productive use of the present by effectively utilizing past experiences in terms of achieving his future goals.

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[1]Shostrum, op. cit., p. 17.

[2]Ibid.; Pitcher and Blaushild, op. cit., pp. 37 & 83.

[3]Bernard Borislow, "Self-Evaluation and Academic Achievement," Underachievement, ed. Milton Kornrich (Springfield, Ill.: Charles C. Thomas, 1965), p. 35.

For purposes of this study only, self-actualization is defined as a state in which one possesses a normal level (40-60 T-score) of Time-Competence (TC) and Inner-Directedness (ID).

Underachiever

In this study the academic underachiever is defined as any student who does not earn a GPA at a level commensurate with his academic performance on achievement tests and/or scholastic aptitude tests; whose GPA, achievement test scores, and/or scholastic aptitude test scores are incongruous (with the GPA being the lowest); or whose failure to achieve a 2.0 GPA does not result from a measured incapacity to achieve.

Self-Concept

Self-concept refers to the "picture" one has of himself and is "painted" by means of feedback from his environments. Fine describes a person with a good self-concept (has realistic self-regard) as one who resembles Maslow's self-actualizing person (as purportedly measured by Shostrum's POI), a healthy individual accepting himself and his behavior not smugly but realistically.[1] Conversely, a person with a poor self-concept has an unrealistically low regard for self, and a relative difficulty accepting himself.

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[1]Benjamin Fine, Underachievers (New York: E. P. Dutton and Co., Inc., 1967), p. 52.

Highly-Motivated Student

For purposes of this study a highly motivated student is defined as one who perceives his chances of success optimistically and desires that success (goal) sufficiently to utilize his own resources toward that end.

Low-Motivated Student

A low-motivated student is one who perceives his chances of success pessimistically thus failing to make the effort to succeed.

CHAPTER II

REVIEW OF LITERATURE

INTRODUCTION

Students in the Transitional Services Program are either those placed in TSP by admissions officers who believe that these students have performed in high school at various degrees of underachievement or those whose ACT-predicted first semester college GPA are less than a 2.0 but who nevertheless apply for admittance to Drake University. One may assume the student thus feels that he can succeed (2.0 GPA or above) else he would not even apply.

Upon their enrollment at Drake University, students in the TSP are considered to have been underachievers. Evidence of this underachievement is based upon their relatively low high school grades, class rank, and/or ACT or SAT scores. Yet, the majority (85 percent) of them have earned a 2.0 GPA or above. This would suggest that their achievement records were below their capacities. Hence, the rubric "underachiever" is used.

THE UNDERACHIEVER

Since TSP students come to the program as underachievers, a survey of literature has been made describing underachievement from etiology to effects in order to facilitate understanding and increase the effectiveness of its amelioration.

There has been a plethora of studies made and articles written concerning the academic underachiever. There are copious lists of the underachiever's personality needs, characteristics, work habits, social attitudes, familial patterns of interaction, socio-economic level, parental occupations and education.[1]

Following is a condensed report of a survey of research in academic underachievement. The report contains contradictions, some of which are undoubtedly due to different research designs and researcher biases.[2]

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[1] J. C. Gowan, "Factors of Achievement in High School and College," Journal of Counseling Psychology, VII (1960), 91-95.

[2] C. Gary Gebhart and Donald P. Hoyt, "Personality Needs of Under- and Over-Achieving Freshmen," Journal of Applied Psychology, XLII, 2 (1958), 125-128.

CHARACTERISTICS OF THE UNDERACHIEVER

Self-Concept

Academic underachievement has been found to be related to a deflated self concept.[1]

In a study at New York University, using the Guilford-Zimmerman Temperament Survey and American Council on Education Psychological Examination on 100 achieving or non-achieving sophomore students, Stevens found that the achievers showed a much greater degree of self-acceptance than did the non-achievers.[2] With the use of personality inventories, projective tests, and autobiographical data, Fink found that achieving boys also had adequate ratings of self-acceptance.[3] Achievement is a more commonly-used yardstick for self-approval than is ability.[4] In other words, the "I can do"

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[1]Peter H. Stevens, "An Investigation of the Relationship Between Certain Aspects of Self-Concept Behavior and Students' Academic Achievement," Dissertation Abstracts, XVI (1956), 2531-2.

[2]Ibid., p. 2532.

[3]Martin B. Fink, "Self-Concept as it Relates to Academic Achievement," California Journal of Educational Psychology, (1962), 13, 57-62, as cited by Jane Beasley Raph, Bright Achievers (New York: Teachers College Press, 1966), p. 37; see also Martin B. Fink, "Objectification of Data Used in Underachievement-Self Concept Study," Underachievement, ed. Milton Kornrich (Springfield, Ill.: Charles C. Thomas, 1965), p. 85.

[4]Fink, "Self-Concept as it Relates to Academic Achievement," op. cit., p. 113.

becomes, for the underachiever, the "I am."[1]

The underachiever does not like himself, and tends to be depressed in his attitude toward self. His perceived academic inferiority and passivity may even reach the point at which he deliberately fails. He tends to lack confidence and to over-rate others.[2]

With the aid of the California Personality Scale, Fink found a college-freshman sample of underachievers to regard themselves as basically evil. They were poorly controlled, saw themselves socially alienated, and felt unhappy and misunderstood.[3]

Horney has hypothesized an "idealized image" which is always extremely flattering to the self and which may include some wished-for characteristics rather than realistic ones, though the potential for such may indeed be there. Underachievers especially tend to cherish the image, yet fail to work to achieve it.[4]

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[1]Fink, "Self-Concept as it Relates to Academic Achievement," op. cit., p. 182.

[2]Ronald G. Taylor, "Personality Traits and Discrepant Achievement, A Review," Journal of Counseling Psychology, XI, 1 (1964), 78.

[3]Fink, "Objectification of Data," op. cit., p. 84.

[4]Karen Horney, Our Inner Conflicts (New York: W. W. Norton, 1945), p. 16.

Berger has suggested that the underachiever

> . . . must avoid situations in which he would not be admired or recognized. He must avoid tasks that he is not certain to master. He may even develop an intense aversion to effort of any kind. To him, the gifted one, the mere vision of a picture he might paint is already the master painting. Any mediocre person can get somewhere by hard work; for him to apply himself like any Tom, Dick and Harry would be an admission that he is not the mastermind, and so humiliating. Since nothing can actually be achieved without work, he defeats by his attitude the very ends he is driven to attain. And the gap between his idealized image and his real self widens.[1]

There is a decided discrepancy between what he knows he can do and what he does.[2] He may have both a grandiose image of self and a poor one at the same time.[3]

The underachiever's self concept is generally lower than that of his achieving peers, but not so low that he gives up. He does not often fail completely, but rather achieves at a barely minimal level.[4]

In a study of twenty female achievers and twenty male achievers compared to nineteen male and twenty-seven female underachieving senior high school students, Shaw used the

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[1]Emmanuel Berger, "Willingness to Accept Limitations and College Success," Kornrich, op. cit., p. 16.

[2]C. Burleigh Wellington and Jean Wellington. The Underachiever; Challenges and Guidelines (Chicago: Rand McNally Curriculum Series, n.d.), p. 37.

[3]Fine, Underachievers (New York: E. P. Dutton and Co., Inc., 1967), p. 52.

[4]Wellington, op. cit., p. 35.

Sarbin Adjective Checklist to ascertain differences in self-concept. Male underachievers showed more negative feelings about themselves than did their achieving counterparts, whereas female underachievers tended to show ambivalent feelings toward themselves compared to their achieving counterparts.[1]

The underachiever often builds his self-concept as he perceives his family's feelings toward him. If there is discrepancy in results of studies of the underachiever's self-concept, it pales in comparison to the variance found in studies concerning his familial milieu. If one can be permitted to generalize the preponderant findings, underachievers come from families the parents of which are in the middle (upward) socio-economic class, that fathers are more apt to be in professions or business, and that one-third or more of the fathers have education beyond high school.[2] Fewer homes provide supportive environments--are domineering or overrestrictive. Parents of underachievers tend to use more severe and less effective punishment, tend to push their children more, or have fewer demands of academic achievement. Fathers are often extremely dominant. Family tension and

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[1]Merville C. Shaw, et al., "The Self-Concept of Underachieving High School Students as Revealed by an Adjective Checklist," Personnel and Guidance Journal, XXXIX (November, 1960), 193-196.

[2]Raph, op. cit., pp. 47-50; Wellington, op. cit., p. 46.

parental disagreement are at a higher level.[1]

There is greater emphasis on ability possessed than use made of it.[2] Fine has pointed out that:

> Independence and "rights" are stressed by parents as opposed to responsibility for quality work. In other words, the underachieving child may be taught to do things "by himself" but not to do things well.[3]

In a study of 48 high school boys with intelligence levels of 120 IQ or above (achievers and underachievers), Morrow and Wilson used sixteen self-report Family Relations Scales to ascertain the students' family relations as seen by the boys themselves. Results showed that families of achievers shared more activities, ideas, and confidences. There was more support, trust, affection, low-key encouragement for academic achievement, and less conflict over parental standards.[4]

Shaw has written:

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[1]William R. Morrow and Robert C. Wilson, "Family Relations of Bright High-Achieving and Underachieving High School Boys," Underachievement, Kornrich, op. cit., p. 188; see also Raph, op. cit., p. 58.

[2]Barbara K. Sutherland, "Case Studies in Educational Failure During Adolescence," Kornrich, op. cit., p. 382.

[3]Fine, op. cit., p. 57.

[4]Morrow and Wilson, op. cit., p. 198; Raph, op. cit., p. 52.

It would appear that achievers generally are expected to be more adult-like at an earlier age than are underachievers. It appears that they have, at a much earlier age, had a great deal more expected of them. Their parents have been confident of their ability to live up to their expectations, while the parents of underachievers have not really been sure what their children were capable of doing. The achievers appear to have had a great deal of parental support in spite of the heavy demands placed upon them, while underachievers are to a much greater extent expected to stand up for themselves. Male underachievers particularly are expected to show masculine traits at an early age. There is a general tendency among the parents of achievers to have a more positive view of their children than there is among the parents of underachievers.

In addition to generally negative attitudes towards education which are apparent among the parents of underachievers, particularly among the fathers, we can see that they also have negative attitudes towards teachers specifically. In spite of both their generally negative and specifically negative attitudes, the parents of underachievers still profess to want these children to attend college. This would appear to be the response influenced mainly by social expectations rather than by their real views on the matter. Certainly we see in the fact that most of them expect that their children will attend college an inability to face reality with regard to the education of their children.

It is obvious from the results of this study that parental attitudes can play a very important role in the level of academic achievement aspired to by their children. Certainly the parents of achievers are more ego involved not only in the education of their children, but in all of their activities. There exists between the parents and children of the underachieving group a large emotional gap which may be either neutral or negative in nature. The lack of supervision, lack of interest, uncertainty with regard to how to raise their children or what to expect of them and the relatively lower levels of aspiration which parents of underachievers have for them all appear to contribute to what may be considered an underachievement syndrome.[1]

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[1] Fine, op. cit., pp. 62-63.

An apparent parental disapproval of the underachiever exists, even outright dislike. Conversely the underachiever may be subjected to oversolicitousness, overanxiety, overprotection, and various inconsistencies.[1] Indeed, it would appear that the underachiever's parents are accused of too much or too little of just about anything.

Time-Competence

A salient characteristic which is possessed in varying degrees by achieving and underachieving students is their concept of and appreciation for the time continuum.[2] It is important to know the degree of time competence which identifies one who will achieve in the college setting (TSP in this case) from one who will not. The above statements provide the rationale for its consideration as an identifying characteristic of the underachiever/achiever.

Underachievers fail to see the present in terms of how it can be used for the accomplishment of tasks for the future.[3] Underachievers are not planners who rise in the morning to write themselves a schedule, demanding of themselves certain things accomplished each hour of the day.

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[1]Raph, op. cit., p. 52.

[2]Anthony Davids and Jack Sidman, "Impulsivity, Time Orientation, and Delayed Gratification in Future Scientists and in Underachieving High School Students," Exceptional Children, XXIX (September-May, 1962), 174.

[3]Wellington, op. cit., p. 32.

> In the pocket, or at least in the mind, of the high achiever there is a schedule of every waking hour: school time, study time, (perhaps) self-improvement time of easier days for either special study or body building, mealtime--and often no time for relaxation. The underachiever who came upon such a schedule would probably ridicule it as a horrible waste.[1]

Justifiable indignation may well ensue at the comparison of the underachiever to the youthful imprisoned delinquent. Yet a commonality may be identified in their comparability of dereliction of responsibility. A study of sixty youthful inmates was conducted at the Tallahassee Federal Correction Institution using the Ross Time Reference Inventory, a questionnaire which samples the subjects' affective response to time continua. The popular stereotype of the delinquent as one who is almost exclusively oriented toward the present is false. Rather, in this study their primary focus was on the future, a secondary focus on the past, and only token interest in the present.[2]

Developmental level affects time orientation. Younger adolescents, according to Cottle, Howard and Pleck of Harvard University, exhibit less realistic attitudes toward time; how the past and future are related meaningfully to the present. This sense of how past, present, and future are related is

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[1] Wellington, op. cit., p. 32.

[2] Edwin I. Megaree, A. Cooper Price, Richard Frohwirth, and Robert Levine, "Time Orientation of Youthful Prison Inmates," Journal of Counseling Psychology, XVII (1970), 8-14.

essential for development of the ability to delay gratification.[1]

According to Klineberg[2] the child who is developmentally at the age of eleven or twelve has developed "concrete operations" which become the means for structuring immediately present reality.

Young adolescents have a poorly defined attitude toward time and especially about the future. They show less concern with knowledge of historical time than older adolescents. They do not fully appreciate the effect of the past on the shaping of present and future events.

In a study done by Cottle, Howard, and Pleck at Harvard University it was revealed that the transition from early to later adolescence includes a veering from an orientation of recall to one of expectation in combination with a sense of relatedness of the past, present, and future.[3] However, it may be ill-advised to assume that late adolescence, when many persons are freshmen in college, always brings this sense of relatedness.

It is important to remember that although children and

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[1]Thomas J. Cottle, Peter Howard, and Joseph Pleck, "Adolescent Perceptions of Time: The Effect of Age, Sex and Social Class," Journal of Personality, XXXVII (1969), 636.

[2]Stephen L. Klineberg, "Changes in Outlook on the Future Between Childhood and Adolescence," Journal of Personality and Social Behavior, VII, 2, 185-193.

[3]Cottle, Howard and Pleck, op. cit., pp. 636-650.

adolescents mature developmentally, they also mature at their own rates.[1] If children and adolescents develop at different rates they should be expected to gain and refine their appreciation for time at different rates, and thus indeed some adolescents may have a retarded development of this appreciation.

According to Heckhausen, "achievement-related experience structures time almost more than anything else."[2]

> Above all it is directed toward the future, fosters longer time spans, connects moments in time, and puts the successions of time periods in order. It also turns back to past incidents, as for instance, to affective states, resulting from success and failure which typically characterize the after-period of a course of action. The course of action itself shows a pronounced future time perspective. Goal setting insofar as they are reality-oriented, are based on a putting together of past and future.[3]

Students in the Transitional Services Program also vary in degrees of appreciation for time. The question is whether time competence is indeed a variable the level of which distinguishes between achievers (2.0 GPA) and underachievers.

As Shostrum suggested, the self-actualizing (and

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[1]Arthur F. Jersild, The Psychology of Adolescence (London: Macmillan Co., 1963), p. 71.

[2]Heinz Heckhausen, The Anatomy of Achievement Motivation (New York: Academic Press, 1967), p. 41.

[3]Ibid.

achieving) person has a solid "fix" on time. He sees each temporal segment with insightful perspective.[1]

Motivation. The motivating characteristics of time assessment attitudes would more succinctly be called, from a phenomenological position, an expectation in terms of time perspective. That is, the expectation is that one will or will not carry his present state into a more excellent state in the future. Again, phenomenologically, perception and performance are stimulated and directed by a perceived temporal discrepancy between what is (present) and what can be (future). Motivation (in this case for scholastic achievement) is intricately involved with time-perspective experiences and affective expectations. The time continuum and structure is viewed as dependent upon achievement experience, and motive is oriented toward hope (of success) or fear (of failure).[2]

Heckhausen found that highly motivated Ss (subjects) make stories, using figures in the TAT, with longer periods of total time perspective and that lie further in the future

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[1]Everett L. Shostrum, Manual, Personal Orientation Inventory (San Diego: Educational and Industrial Testing Service, 1966), p. 19.

[2]Heckhausen, op. cit., p. 42; also Klineberg, op. cit., p. 186.

than do low-motivated Ss.[1] Time structure of action is also included. Good students were better able to link sequential stages in time perspective into a single unit. Though good students showed more expectant and optimistic feelings for the future than did poor students, there was no correlation between intelligence and future-orientation.[2]

Green and Knapp found that highly motivated Ss saw time spans which extended equally into the past and future as being more closely tied to the present; that the entire range of time had more clearly defined parameters than was the case for those Ss with low motivation.[3]

A word about motivation for achievement. Though many books and articles relate studies of the underachiever, achiever, the highly motivated S and the low-motivated S, the reader must be cognizant of the fact that patterns of achievement motivation can and do change--this change being dependent upon development, family phenomenology, goal changes,

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[1]Heckhausen, op. cit., p. 43; David C. McClelland, ed., "Notes for a Revised Theory of Motivation," Studies in Motivation (New York: Appleton-Century-Crofts, Inc., 1955), p. 228.

[2]Heckhausen, op. cit., p. 43.

[3]Helen B. Green and R. H. Knapp, "Time Adjustment, Aesthetic Preference, and Need for Achievement," Journal of Abnormal Social Psychology, LVIII (1959), 140-142; also, Heckhausen, op. cit., p. 45.

models, and legion other variables.[1] Hope for and anticipation of change in the underachiever and low-motivated, then, is vital lest the identification of the low-motivated and/or underachiever be a hopeless, yes, permanent label of a static condition.

Thus it would seem that the TSP student who academically achieves would be one who is able to relate meaningfully past experiences and future goals to the value of the opportunity of doing college work at the present time and one who would reveal this ability by use of present time for achieving academic goals (2.0 GPA) at the end of the semester. Additionally, motivation may stem purely from situational and environmental cues (TSP students are placed in a new environment probably different from home or high school) or it may be of intrinsic origin which may reflect a trait (such as time competence) of long-term duration as compared to a state which reflects the situational cues mentioned above.

Goal setting. Klineberg has observed that "as the individual matures, he becomes willing to envision increasingly distant future events." In a study of twenty maladjusted ("serious, debilitating problems") and twenty-two normal adolescents, he found future orientation and a greater

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[1] Heckhausen, op. cit., pp. 141-162; also Irvin J. Lehmann, "Changes in Critical Thinking and Values From Freshman to Senior Year," Journal of Educational Psychology, LIV, 6 (1963), 305-315.

proportion of present references among the ten things the normal adolescents had recently thought of or spoken about.[1]

One of the keys to college success is the establishment of goals. The establishment of goals implies at least some degree of focus on the future. Goals, in order to be met, must appear to the student to be "worth it," and must be perceived by the student as attainable in the future as a result of hard work in the present.[2] Goals often imply delay of gratification. Many underachievers have difficulty placing a premium on getting a better reward at a later date. Today's satisfaction may be perceived as more enticing. Goal setting may be quite unrealistic. Either a goal is set impossibly high or so low that reaching it would provide very little pride. As stated earlier, the lofty goal of one who is time incompetent usually lacks intermediate steps which would lend a more realistic approach, further evidence of a time perception deficiency.[3]

One reason for the underachiever's failure to set or achieve goals is his tendency to procrastinate; his lack of appreciation of the worth of today in terms of what can

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[1]Klineberg, op. cit., p. 191.

[2]Robert W. Pitcher and B. Blaushild, Why College Students Fail (New York: Funk and Wagnalls, 1970), p. 38; John E. Teahan, "Future Time Perspective, Optimism, and Academic Achievement," Journal of Abnormal Psychology, LVII (1958), 379-80.

[3]Fine, op. cit., p. 54; also Wellington, op. cit., p. 36.

realistically be accomplished.

> People with strong achievement motivation generally are self-confident individuals who are at their best taking personal responsibility in situations where they can control what happens to them. They set challenging goals demanding maximum effort, but goals which are possible to attain; they are not satisfied with automatic success that comes from easy goals, nor do they try to do the impossible. Time rushes by them and causes mild anxiety that there won't be enough hours to get things done. As a result they make more accurate long-range plans than people with less achievement motivation. They like to get regular, concrete feedback on how well they are doing so that their plans can be modified accordingly. They take pride in their accomplishments and get pleasure from striving for the challenging goals of excellence they set.[1]

One of the currently popular wall posters that can be found for sale would seem to be particularly relevant to the procrastinating, time-incompetent (and underachieving) student. It depicts a man looking at a calendar of today, with a time bomb sizzling behind him. The caption reads, "Tomorrow is often the busiest day of the week."

Impulsivity. At the opposite end of the continuum and almost paradoxically, an underachieving student may be found to be quite impulsive. Davids and Sidman, in an effort to test the theories of development and familiar beliefs concerning the motivational dynamics of academically successful and unsuccessful students, compared the two groups on:

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[1]Alfred S. Alschuler, Diane Tabor, and James McIntyre, Teaching Achievement Motivation (Middletown, Connecticut: Educational Ventures, Inc., 1971), p. 6.

(1) impulsivity and ability to control and inhibit responses, (2) accuracy of perceptions and judgments of time passage, (3) degree of "present" orientation, and (4) ability to delay gratification.[1] The two groups were matched for intelligence but opposite in their plans for or against college enrollment and vocational choices made or undetermined. Following a battery of experimental procedure which included mazes, story completions, time lapse estimation, and situational choice-making, the high-achieving group was found to be (a) less impulsive and better able to control responses in a situation which required motor inhibition, (b) more future-oriented in their fantasies, (c) less concerned with immediate gratification, and (d) better able to establish goals for the future. The underachieving student surely cannot be accused of devaluing the present. Indeed, he may treasure it highly. Rather, it is the way in which he values it as opposed to the achiever's appreciation for present. The underachiever sees it in terms of short-range pleasure to be gained now (unless, as mentioned earlier, his underachievement is dependent only upon situational cues, such as pressure from parents), whereas the achiever sees it in terms of opportunity to work for the accomplishment of a goal to be reached--tomorrow.[2]

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[1]Davids and Sidman, op. cit., pp. 170-174.

[2]Taylor, op. cit., p. 80; also Wellington, op. cit., pp. 68-69.

Anxiety. It would be easy to scorn the low-motivated, unsuccessful student were it not for the fact that he is often self-disparaging already. He is often so guilt ridden that he may continue to gratify his immediate desires in an effort to "forget," only to wake up the next day full of guilt once again. The feeling of guilt is, of course, a negative assessment of one's past behavior which, by definition, suggests a preoccupation with time past, to the exclusion and/or confusion of the value of present and future time.[1]

Anxiety, according to Webster, is "painful uneasiness of mind over an impending or anticipated ill."[2] Krauss and Ruiz of the University of Kansas School of Medicine define anxiety as that which "may be conceptualized as a time-related construct involving subjective experiences occurring in the 'present' and the anticipation of events which might occur in the 'future'." Their findings are that differences in anxiety level are reflected in differences in temporal perspective.[3]

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[1] Taylor, op. cit., p. ; also Pitcher and Blaushild, op. cit., p. 125.

[2] Webster's Collegiate Dictionary (5th ed.; Springfield, Mass.: G. & C. Merriam Co., Publisher, 1947).

[3] Herbert H. Krauss and Rene A. Ruiz, "Anxiety and Temporal Perspective," Journal of Clinical Psychology, XXIII (1967), 454; also James T. Webb and Barbara S. Meyers, Development Aspects of Temporal Orientation in Adolescents (Bethesda, Md.: ERIC Document Reproduction Service, April, 1972).

The underachiever, though he may be poorly motivated, is often anxious, possibly because he is fearful of failing to reach his unrealistic goal or because of his awareness of continued procrastination. For whatever reason, anxiety in the underachieving student may point to a time orientation which is out of balance.

It would appear from this review of the literature that a concomitant of underachievement is a distorted time orientation. Hence, the measure of a student's time competence may be a predictor of success in the TSP through the first semester of enrollment in the University.

Inner-Directedness

The extent to which a student is self-directed, perceives himself to be able to make good decisions and accepts responsibility for his own actions may be the extent to which he is a success in college. This, of course, is not to suggest that he should not value others and their suggestions, but if one accepts Rogers' concept of the self-actualizing tendency, then it is reasonable to assume that inner-directedness may best facilitate growth and success for that person, whether or not it be in the academic realm.[1]

Developmental phase. There is a relatively large

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[1]Carl Rogers, On Becoming a Person (Boston: Houghton Mifflin Co., 1960), p. 351.

body of evidence which suggests that the less cognitively mature person is one who anticipates negative outcomes, and thus perceives the outcomes as having happened "to" him rather than being caused "by" him. Indeed, he fails to be directed by his own will to the extent that outcomes may be determined by others.[1]

The under-achieving student tends to feel that the only way he can succeed is by being told what to do and by being "pressured" to do it.[2] In general, whether toward teachers, parents or peers, he exhibits a belief that others have better ideas for him than he has for himself.[3] McKenzie used the MMPI scales to differentiate between underachieving (those whose GPA's and measured ability were discrepant) and achieving students. He found that underachievers tend to externalize conflict, to be impulsive, to lack long range goals, and to depend for guidance on the standards of others.[4]

It could be argued that if an underachieving student chose as a model or leader a student who is an achiever, the

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[1]H. I. Day, D. E. Berlyne, and D. E. Hunt, Intrinsic Motivation: A New Direction in Education (Toronto: Holt, Rinehart and Winston of Canada, Limited, 1971).

[2]Wellington, op. cit., p. 62.

[3]Raph, op. cit., p. 30.

[4]J. D. McKenzie, Jr., "An Attempt to Develop Minnesota Multiphasic Personality Inventory Scales Predictive of Academic Over- and Under-Achievement," Dissertation Abstracts, XXII, 1 (1961), 632.

underachiever might be expected to achieve--that this "other-directed" person could become an achiever by virtue of his dependence on the achiever. However, the hope would have to be that the association was of long enough duration to allow the underachiever to internalize some of the modeling behavior that results in achievement.

In a study by Shaw and Black, achievers and underachievers matched for I.Q. were compared for responses to the Rosenweig Picture-Frustration Study.[1] Content of the responses revealed that "underachievers . . . feel that some uncontrollable factors in their environment are in large part responsible for what happens to them and who are probably less capable of directly attacking the barriers which stand in their way."[2]

Learned behavior. Inner or other-directedness may be a learned response.[3] There appears to be evidence that mothers in particular can and do have a measurable influence on their

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[1]M. C. Shaw and M. D. Black, "The Reaction to Frustration of Bright High School Underachievers," California Journal of Educational Research, XI, 3 (1960), 120-124, as cited in Raph, op. cit., p. 32.

[2]Raph, op. cit., p. 33.

[3]John E. Teahan, "Parental Attitudes and College Success," Kornrich, op. cit., p. 395; also McClelland, op. cit., p. 260.

children's achievement motivation. Crandall and others[1] have found that achievement motivation is less related to early training in self-reliance than to a lesser concern for conformity. However, both self-reliance and conformity relate to achievement motivation; it is the timing that is at issue. The later the self-reliance training, the lower the proclivity for achievement motivation and the greater the tendency to conform. It must be recognized, however, that a combination of early and intensive pressure for achievement may prejudice the child against achievement.[2]

Underachievement may be cyclical. One fails to achieve because he lacks the assurance that he can succeed on his own, and when he fails, he is reminded again of his low level of worth, his dependence on others, etc.[3]

Though inner or other-directedness may be learned or modified, Katz used Rotter's hypothesis which suggests that there are consistent individual differences between people who believe in the internal control of reinforcement as opposed to external control (other-directed). In a study at

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[1]V. J. Crandall, W. Kathousky, and Anne Preston, "A Conceptual Formulation for Some Research on Children's Achievement Development," Child Development, XXXI (1960), 787-797.

[2]B. C. Rosen and R. D'Andrade, "The Psychological Origins of Achievement Motivation," Sociometry, XXII (1959), 185-218.

[3]Teahan, "Parental Attitudes," op. cit., p. 395; also McClelland, op. cit., p. 260.

the University of Connecticut, in which he observed 499 introductory psychology students in classroom behavior and in course credit outcome, he found that those students who were classified as "internals" (inner-directed) had earned significantly more credit than "externals." Internals were reported to view their academic results as contingent upon their own efforts, whereas externals were not inclined to see their actions as having effects on their success or failure.[1]

The assumption that dependence on self (inner-directedness) is a trait which can be developed further by parental attitudes and training may offer a fairly negative possibility if the student has parents who do not foster independence and initiative. However, if behavior can be learned, perhaps it can also be unlearned with behavior substitution. Nikelly has suggested that underachievement may well have dependency as its etiology. He has suggested that an awareness of the degree to which he is dependent (other-directed) may be the foremost step toward its amelioration. A standardized measure (in this case, the POI) could provide the necessary evidence for the underachiever.[2]

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[1]Harvey A. Katz and others, Internal vs. External Control and Two Examples of Classroom Behavior (Bethesda, Md.: ERIC Document Reproduction Service, ED 054 476, 1967).

[2]Arthur G. Nikelly, "The Dependent Adolescent," Adolescence, VI (Summer, 1971), 139-144.

A positive suggestion from Lindgren's book, The Psychology of College Success--A Dynamic Approach, is that

> college does tend to change students in rather fundamental ways, in the sense that students develop more intellectual interests, become more aware of themselves as individuals, and also develop a higher degree of autonomy (independence and the capacity for self-direction) than individuals who do not attend college.[1]

This suggestion mitigates the despair of the fatalistic educator who may identify an underachiever (a TSP student, for example) and feel there is no hope.

Dependency may be an unconscious effort to gain control or acceptance from others upon whom the underachiever has pinned his hopes for affiliation.[2] As stated previously, the other-directed, dependent, underachieving student often has a low level of self-esteem, and consequently sees others as offering a better direction for him than he could choose for himself. (The optimum condition, according to Shostrum, is to be self-directive but to value input from others as well.)[3]

Conformity and persuasability. Achievement is probably not a concomitant of affiliation. When French gave her

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[1]Henry Clay Lindgren, The Psychology of College Success--A Dynamic Approach (New York: John Wiley & Sons, 1969), p. 109.

[2]Nikelly, loc. cit.

[3]Shostrum, op. cit., p. 17.

subjects a choice between partners for a task which were known for ability on the task but were not liked and partners who were liked but whose task performance was unknown, the Ss with high achievement motivation and low need for affiliation chose the disliked but proficient partner, whereas the low achievement-motivation Ss chose their partners in terms of likeableness, with a de-emphasis on successful solution of the task.[1]

The self-concept may be the key to need for affiliation and propensity to conformity--a determinant of inner-directedness.[2] Horrocks has suggested that the less established or secure the self-concept, the greater the need to conform.[3] The underachiever, already recognized as preponderantly insecure in his feelings about self, can be expected to be more vulnerable to peer pressure to conform. Since peer pressure often militates with the academic, conformity is detrimental to scholastic achievement. In a study of Midwest undergraduate's assessment of most valuable gains during their college years, two thirds of the senior class felt that

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[1]Elizabeth G. French, "Motivation as a Variable in Work-Partner Selection," Journal of Abnormal and Social Psychology, LIII (1956), 96-99.

[2]P. E. McGhee and R. C. Teehan, "Conformity Behavior and Need for Affiliation," Journal of Social Psychology, LXXII (1967), 117-21.

[3]John E. Horrocks, The Psychology of Adolescence (Boston: Houghton Mifflin Co., 1969), p. 252.

social development was the most significant, to the exclusion of intellectual development.[1]

When college students, who have achieved long enough to have become seniors, perceive social growth as more important than intellectual growth, the underachieving freshman might be expected to place an even greater emphasis upon peer group acceptance and conformity.

Students who have elected to participate in help-programs such as the TSP must have opted for the program, due to at least a temporary desire to achieve. Yet, academic achievement, attractive though it may be, is in large part contingent upon the extent to which the student is persuaded (other-directed) to study in lieu of socializing.

> Students whose main concern is being accepted by their friends and acquaintances (social success) are less likely to be academically successful than are students who care less about social needs and more about moving ahead in the adult world. The latter type of students is inclined to be task-oriented, responsible, and responsive to the demands of persons in authority. The socially oriented individual has more difficulty in planning and carrying out the kind of strategies that succeed academically, partly because it goes against the grain for him to assign much importance to academic matters and partly because his continuing success in the social field is a built-in source of distractions for him. Furthermore, it is the socially successful person who provides the leadership on campuses where students combine to resist the demands and expectations of their instructors.[2]

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[1] Horrocks, op. cit., p. 248.

[2] Irving L. Janis, "Personality Correlates of Susceptibility to Persuasion," Journal of Personality, XXII (September-June, 1953-54), 79.

Janis sampled the susceptibility to persuasion of 78 male college students at Yale University based upon their resistance to opinion change when asked to communicate a persuasive news report, or to listen to one given by someone else. He found that:

> students of low self-esteem were associated with high persuasibility: that "excessive fear of social disapproval may give rise to strong facilitating motivations with respect to acceptance of persuasive communications. Persons who are exceptionally lacking in a sense of personal adequacy may have an exceptionally strong need for approval. When such persons come to realize that their opinions are at variance with what someone else believes, they may fail to rely upon their own judgment because of inability to tolerate social disapproval. They may tend to be indiscriminantly influenced by anticipations of approval from the communicator or from others who are assumed to share his point of view.[1]

To reiterate, the apparent assumption that all underachievers have a low self concept and that all achievers possess a high one is a generalization that is untenable. Though Holland is decidedly in the minority, he nevertheless has proclaimed that it is the overachiever who has feelings of unworthiness and who worries about the social impression he is making.[2] Yet a preponderance of prudent educators seem to recognize the probability of a higher incidence of low self-esteem among underachievers.

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[1] Janis, op. cit., p. 80.

[2] J. L. Holland, "Creative and Academic Performance Among Talented Adolescents," Journal of Educational Psychology, LII (1961), 136-147.

Linton and Graham conducted a study with 52 male subjects in their first semester of college to determine susceptibility to persuasion (opinion change).[1] One of the measures used was a questionnaire identifying the distinction between inner-directed (ID) and other-directed (OD) character, a modification of David Riesman's concept.[2] Important to this concept was the recognition that ID-OD refers to an attitude or value continuum rather than to a characterological distinction based upon character mechanisms, patterns of behavior, or source of standards or values. . . ."[3] Sub-scales of the questionnaire included the following:

> Subscale A. A hardheaded, practical orientation (ID) vs. a rather global unrealistic interest in "warmth" and "sincerity" (OD).
>
> Subscale B. Work-oriented values such as efficiency, control, competence, and meeting high personal standards (ID) vs. needs for friendship, popularity, intimacy, group adjustment and cooperation, and a responsiveness to social pressure on the basis of these needs (D).
>
> Subscale C. Concern with self, with inner drives and preferences which may be unconventional, with strivings toward creative achievement and personal recognition, and with independence from social restrictions (ID) vs. needs for security, social approval, participation in the community, and a responsiveness toward conformity pressures on the basis of these needs (OD).

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[1]Harriet Linton and Elaine Graham, "Personality Correlates of Persuasability," Personality and Persuasability, eds. Carl I. Howland and Irving L. Janis (New Haven: Yale University Press, 1966), p. 69.

[2]David Riesman, The Lonely Crowd (New Haven: Yale University Press, 1950), p. 79.

[3]Janis, op. cit., p. 79.

Subscale D. Concern with ideas and principles, as against people, and an intellectualized approach to human problems (ID) vs. concern for people and for adjustment in concrete, short-run situations (OD).[1]

Scores on the general ID-OD questionnaire were compared for each group. Opinion-changers were predicted to accept more other-directed values than non-changers who would lean toward inner-direction and autonomy. Predictions were supported at the .02 level.[2] In summary, the study identified an opinion changer as one who is apt to be easily persuaded, is apt to choose his behavior by external standards, to have values that favor conformity, to have a weak and immature self-concept, to be unimaginative, and to have a limited range of interests. He is not given to self-analysis, and dislikes pondering his problems. He is deficient in strong sources of self-direction and manages his life by valuing and depending on external directives. This description was gleaned from results of a tilting room test, an embedded figures test, an autokinetic situation, the Rorshach test, and the ID-OD questionnaire.

The non-changer in the same series of tests was found to be less affected by verbal persuasion, to be more mature and self-assured, to value subjective feelings to a greater

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[1]Linton and Graham, op. cit., p. 81.

[2]Ibid., p. 82.

extent, and to have a desire for independence without an accompanying rebelliousness.[1]

Aspiration. The Wellingtons reported a marked relationship between success of failure in one task and level of aspiration in another, if the tasks were psychologically related.[2] In that an underachiever may be thought to have experienced, in general, more failure than successes, he may be expected to have an unsuitable level of aspiration.[3] McClelland's extensive investigation of familial milieu, which nurtures high achievement motives, found emphasis upon development of the child's dependence upon self (inner-directedness).[4]

Branden's observations have resulted in a somewhat sweeping generalization that motivation and the nature and degree of a person's self-esteem are natural concomitants.[5]

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[1]Lenton and Graham, op. cit., pp. 95-97.

[2]Wellington, op. cit., p. 38.

[3]Orley R. Herron, New Dimension in Student Personnel Administration (Scranton: International Textbook Co., 1970), p. 161.

[4]David C. McClelland, et al., The Achievement Motive (New York: Appleton Century Crofts, 1953), p. 327.

[5]Nathaniel Branden, The Psychology of Self-Esteem (Los Angeles: Nash Publishing Co., 1970), p. viii.

> Achievement motivation is directive toward certain end results that are produced by one's own ability; namely to achieve success and avoid failure. Achievement motivation therefore, is markedly goal directed.[1]

Goal-directedness is dependent upon the student's orientation for locus of responsibility for achievement of goal. The goal in a school situation may be expected to differ in degree of realization and in academic or social salience, dependent upon the student's propensity for self or other directedness. Riesman, Glazer, and Denny have described the ends of the inner-other-directed continuum:

> The source of direction for the individual is "inner" in the sense that it is implanted early in life by the elders and directed toward generalized but nonetheless inescapably destined goals. The inner-directed person becomes capable of maintaining a delicate balance between the demands upon him of his life goal and the buffetings of his external environment.[2]
>
> . . . Common to all the other-directed people is that their contemporaries are the source of direction for the individual--either those known to him or those with whom he is indirectly acquainted, through friends and through the mass media. This source is of course "externalized" in the sense that dependence on it for guidance in life is implanted early. The goals toward which the other-directed person strives shift with that guidance; it is only the process of striving itself and the process of paying close attention to the signals from others that remain unaltered throughout life.[3]

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[1]Heckhausen, op. cit., p. 67.

[2]David Riesman, Nathan Glazer, and Reuel Denney, "Character and Society," McClelland, Studies, op. cit., pp. 260-61; also Herron, op. cit., p. 161.

[3]Riesman, Glazer, and Denney, op. cit., p. 265.

Riesman, Glazer, and Denney have suggested that all people want and need to be liked by some of the people some of the time, but the other-directed person makes this his chief source of direction and area of sensitivity.[1]

In a study of college women in an introductory psychology course, Gergen, Jones, and Davis found that those students were most influenced by experimenters whom they perceived as liking them.[2] When an underachieving adolescent fails again, as he so often does and perceives his parents or teachers as disapproving of him, he is apt to turn to his peer group--those with whom he feels most accepted--other academically irresponsible students. Thus the other-directed, affiliative student may be expected to have as his goal approval rather than achievement.

Again, the educator cannot afford to despair when he recognizes a student as being other-directed. Rather he must find a way to aid the student in setting realistic goals which should lead to an increased number of academic successes and eventually an upward revision of self-concept and level of aspiration. As stated earlier, identifying for the student his level of inner or other-directedness may aid him in effecting its revision. It also may aid the TSP admissions

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[1]Riesman, Glazer, and Denney, op. cit., p. 265.

[2]E. E. Jones, K. J. Gergen and K. E. Davis, "Some Determinations of Reactions to Being Approved or Disapproved as a Person," Psychological Monographs, LXXVI, 2 (1962).

counselor in determining whether there is a level of ID below which the change in the situational cues of one semester would afford sufficient time to change from underachievement and other-directedness to achievement (2.0 GPA) and inner-directedness.

Self-Actualization

The underachiever may have failed to develop the self-actualizing tendency. Carl Rogers has observed that:

> the most impressive fact about the individual human being seems to be his directional tendency toward wholeness, toward actualization of his potentialities.[1]

Maslow has theorized a presence within the human being, a tendency toward, or need for growing in a direction that can be called self-actualization or psychological health. Under this rubric, he sees a pressure for unity within the personality, a tendency toward spontaneous expressiveness, full individuality, seeing the truth rather than being blind. Human beings press toward what society recognizes as honorable: high values, serenity, kindness, courage, honesty, love, unselfishness, and goodness.[2] Again, this self-actualization

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[1]Carl Rogers, "The Actualizing Tendency in Relation to 'Motives' and to Consciousness," Nebraska Symposium on Motivation (Lincoln: University of Nebraska Press, 1963), Vol. XI, p. 4.

[2]Abraham H. Maslow, Toward a Psychology of Being (Princeton, New Jersey: D. Van Nostrand Company, Inc., 1968), p. 155.

should be placed on a continuum. It is not an all-or-nothing entity but rather, its frequency and amplitude may fluctuate.[1]

Angyal has stated that the organism which is self-actualizing is moving in the direction of an increasing self government, self-regulation, and autonomy, and away from control by external forces.[2] Sullivan saw the organism as one with forward motion.[3] Horney termed the force to grow as a driving one in which the person uses perseverance to know self and to let nothing prevent his growth.[4]

Though self-actualization is the tendency to become all that one can become, the tendency is used only in areas of productivity. For example, the capacity for becoming depressed, for recreational vomiting or for other such objectionable feats, is not included in the propensity for self-actualization.[5]

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[1] Maslow, op. cit., p. 97.

[2] A. Angyal, Foundation for a Science of Personality (New York: Commonwealth Fund, 1941), pp. 32-50.

[3] H. S. Sullivan, Conceptions of Modern Psychiatry (Washington, D.C.: U. A. White Foundation, 1945), p. 48.

[4] Karen Horney, Response, Self Analysis (New York: Norton, 1942), p. 48.

[5] Carl Rogers, "The Self-Actualizing Tendency," Studies in Motivation, ed. David C. McClelland, op. cit., p. 83.

As Rogers stated,

> As I study . . . I find what seems to me to be a very significant thing. I find that the urge for a greater degree of independence, the desire for a self-determined integration, the tendency to strive, even through much pain, toward a socialized maturity, is as strong as--no, is stronger than--the desire for comfortable dependence, the need to rely upon external authority for assurance . . . Clinically I find to be true that though an individual may remain dependent because he has always been so, or may drift into dependence without realizing what he is doing, or may temporarily wish to be dependent because his situation appears desperate, I have yet to find the individual who, when he examines his situation deeply, and feels that he perceives it clearly, deliberately chooses dependence, deliberately chooses to have the integrated direction of himself undertaken by another. When all the elements are clearly perceived, the balance seems invariably in the direction of the painful but ultimately rewarding path of self-actualization or growth.[1]

However, the theorists who espouse the concept of self-actualization are not without their adversaries. B. F. Skinner, in Beyond Freedom and Dignity, proposes:

> To solve the problems of the poor we must inspire self-respect, encourage initiative, and reduce frustration. To allay the disaffection of the young, we must provide a sense of purpose and reduce feelings of alienation or hopelessness. Realizing that we have no effective means of doing any of this, we ourselves may experience a crisis belief or a loss of confidence, which can be corrected only by returning to a faith in man's inner capacities.[2]

Yet, Skinner finds the "inner man," the autonomous man, serves only to "explain" things which are as yet inexplicable.

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[1] McClelland, Studies in Motivation, op. cit., p. 85.

[2] B. F. Skinner, Beyond Freedom and Dignity (New York: Bantom/Vintage Books, 1972), p. 7.

> The function of the inner man is to provide an explanation which will not be explained in turn. Explanation stops with him. He is not a mediator between past and current behavior, he is a center from which behavior emanates. He initiates, originates, and creates and in doing so he remains, as he was for the Greeks, divine. We say that he is autonomous--and so far as a science of behavior is concerned, that means miraculous.[1]

There are reasons, however, for believing that the self-actualizing tendency is a viable concept. Respect for clinical observations often pale in the presence of data gleaned from research. The question is whether psychotherapist's notions concerning self-actualization and the inner urge to grow and improve is a tenable premise when under a researcher's scrutiny. The experiments of Dember, Earl, and Paradise revealed that rats prefer a stimulating environment over a simple one.[2] Berlyne's studies concerning exploratory behavior, curiosity, and play have revealed that organisms prefer a variety of stimuli.[3]

R. W. White of Harvard University insists in his article on motivation that organisms are not "empty," but

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[1]Skinner, op. cit., p. 12.

[2]W. N. Dember, R. W. Earl, and N. Paradise, "Response by Rats to Differential Stimulus Complexity," Journal of Comparative Psychology, L (1957), 514-518.

[3]D. E. Berlyne, Conflict, Arousal, and Curiosity (New York: McGraw-Hill, 1960), p. 80.

active, directional, and always "up to something."[1]

Even though the concept of self-actualization may be defensible, in order to be scientifically respectable it must be measurable and tied to an observable behavior--in this case achievement.

In a study using the Personal Orientation Inventory at Oregon State University, LeMay and Damm found that selected freshmen underachievers (determined by SAT scores and college first-semester GPA) scored lower on the POI than did academically successful (2.0 GPA) students. Significant (.05 or better) differences between achievers and underachievers were found on the Inner-Directed (ID) scale and on five of the sub-scales.[2]

Robert A. C. Stewart, at Massey University, New Zealand, with a sample of thirty-one sophomore, junior, and senior students, found significant relationships ($p < .05$) between GPA and the Inner-Directed scale and Capacity for Intimate Contact (a sub-scale). As stated earlier, developmental level affects aspects of self-actualization.[3] Stewart found that upperclassmen tended to score higher on these two

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[1]R. W. White, "Motivation Reconsidered: The Concept of Competence," Psychological Review, LXVI (1959), 315.

[2]Morris L. LeMay and Vernon J. Damm, "The Personal Orientation Inventory as a Measure of Self-Actualization of Underachievers," Measurement and Evaluation in Guidance, I, 2 (Summer, 1968), 110-114.

[3]R. A. C. Stewart, "Academic Performance and Components of Self-Actualization," Perceptual and Motor Skills (1968), 26, 918.

scales than did the underclassmen.

In an attempt to determine whether or not increments in self-actualization could be tied to different classroom approaches, Lieb and Snyder found that all of the college students involved increased in self-actualization during one semester.[1] The "special-ness" of the classes may have provided, according to these researchers, the special attention needed to fulfill lower level needs and release them for the increased level of self-actualization.

Thus, some studies have shown that self-actualization is an observable and measureable entity related to achievement behavior.

Other Characteristics

Additional characteristics are a part of a composite picture which may be drawn of the underachieving student. Gebhart and Hoyt, from a sample of 240 freshmen men at Kansas State and with the use of the Edwards Personal Preference Schedule, found that underachievers score higher than achievers on the Nurturance, Affiliation, and Change Scales and lower on Achievement, Intraception, and Consistency.[2]

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[1]J. W. Lieb and W. U. Snyder, "Effects of Group Discussions on Underachievement and Self-Actualization," Journal of Counseling Psychology, XIV (1967), 282-285.

[2]Gebhart and Hoyt, op. cit., p. 128.

Level of externalism. The underachiever believes in magic; he lacks a sense of responsibility. He feels that his lot in life is determined by luck, parents, peers, teachers, or events outside his own power.[1] He fails to see that his degree of success is directly connected with the amount of effort he has made. He often reports that things are "out of his control".[2] "How come it doesn't just hit me while I sit there?" is his plea.[3]

Not only is the underachiever convinced that things happen to him, rather than that he makes them happen, but the emphasis, so far as he is concerned, is on the "him". Though as a parent of an adolescent observed recently that "teenagers are notoriously self-centered", adolescent underachievers seem to have the edge.[4]

Wellington quoted one youth in an interview:

> Why should a guy make use of his ability even if he had it. For everybody else? I mean, why should you do something like that? Why should you, if you don't know what you want yourself? Why should you make use of your intelligence the way somebody else thinks you should? I mean, I think it's something

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[1]Raph, op. cit., p. 186; Wellington, op. cit., p. 24; Fine, op. cit., p. 17.

[2]Day, Berlyne, and Hunt, op. cit., p. 12.

[3]Wellington, op. cit., p. 34.

[4]Raph, op. cit., pp. 66-67.

you should decide for yourself. -- It's nobody else's business. What obligation do you have to them?[1]

Greater concern for health is also a marked and characteristic difference in the underachiever. Combined with that is a higher incidence of absence from school.[2]

Frustration. The "double bind" is the situation in which the underachiever often finds himself. When he does finally achieve his parents are apt to say, "We knew you could do it," or "I told you that if you tried you would succeed." Then, if he continues to succeed, instead of getting the praise he wants he will be accused of having been lazy all along.[3]

Hedonism. "Never do today what can be put off until tomorrow," would undoubtedly be opted by the underachiever in favor of the more common and accepted, "never put off 'til tomorrow what can be done today." Sleep and T.V. programs loom up as enticing alternatives to study.[4]

Paradoxically, though the underachiever prefers to

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[1]Wellington, op. cit., p. 24.

[2]Heckhausen, op. cit., p. 93.

[3]Ira Iscoe, "'I Told You So': The Logical Dilemma of the Bright Underachieving Child," Underachievement, ed. Milton Kornrich, op. cit., p. 175.

[4]Wellington, op. cit., pp. 24, 67.

procrastinate in making an effort and completing tasks, he displays an irritable unwillingness to delay gratification. To him today is for living, for pleasure, with little appreciation or insight into the worth of today's efforts in reaching the wished-for status or events of tomorrow.[1] He tends to see little relevance of core courses to "his world."

Inhibitionism. The underachiever dislikes being in the academic limelight; shadows offer cover for lack of involvement and preparation.[2] The dominance-achievement dyad has slipped through his fingers.[3] He resists being placed in a competitive academic situation;[4] in fact, he actually does not perform as well in competition.[5]

Risk-taking is usually studiously avoided. So long as challenge is circumvented, the underachiever reduces his need to come to grips with his shoddy study habits and lack of organization. Typical comments when a risk has been taken but failure has occurred are "If I had just studied more . . .

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[1]Wellington, op. cit., p. 25.

[2]Ibid., p. 59.

[3]Robert E. Mogar, "Competition, Achievement, and Personality," Journal of Counseling Psychology, VII (1961), 161.

[4]Fine, op. cit., p. 54.

[5]Heckhausen, op. cit., p. 76.

if I weren't so lazy . . . if I applied myself."[1]

When risks are taken or goals are set, they often lack the student's consideration of his abilities and the likelihood of his attaining the goal. Either the goal is so low that there is no chance of his failing to achieve it or it is so unrealistically high that it is extremely unlikely that he will be able to reach it. He usually fails to set intermediate goals and lacks any plan for reaching his goals--long-term or short-term.[2]

Lack of confidence. Heckhausen found in a study contrasting successful with unsuccessful students, that achievers were more highly motivated and self confident when they set an initial goal for a new task for which they did not know their performance capabilities.[3] As Wellington has observed success (or failure) in one area affects level of aspiration in another.[4] For the underachiever, failure could almost be compared to a progressive disease.[5] And for the achiever who "expects the best and gets it," success accrues to him at

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[1]Raph, op. cit., p. 187.

[2]Heckhausen, op. cit., pp. 92-94; also Pitcher and Blaushild, op. cit., p. 23.

[3]Heckhausen, op. cit., p. 74.

[4]Wellington, op. cit., p. 38.

[5]Fine, op. cit., p. 21.

almost every turn.[1]

Level of aspiration. The underachiever has difficulty verbalizing any aspirations he may have.[2] Level of aspiration is not only what one says he wants but also what he is willing to pursue. For the underachiever, as stated earlier, his level of aspiration may be unrealistically high, but his level of achievement (what he actually achieves) is too often disappointingly low.[3]

Achievers and underachievers alike at times have motives for achievement. The achievement motive is considered either to be a disposition to approach success or to avoid failure.[4] McClelland's achievement score has been found to identify underachievers by their low scores as compared to achievers.[5] Achievers are motivated by the desire for success whereas underachievers are motivated by their desire to avoid failure.[6]

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[1]Norman Vincent Peale, The Power of Positive Thinking (Englewood Cliffs, N.J.: Prentice-Hall, 1952).

[2]David C. McClelland, A. Rindlisbacher, and Richard deCharms, "Religious and Other Sources of Parental Attitudes Toward Independence Training," McClelland, Studies in Motivation, op. cit., pp. 395-6.

[3]Wellington, op. cit., pp. 32-33.

[4]John W. Atkinson and Norman T. Feather, A Theory of Achievement Motivation (New York: John Wiley and Sons, 1966), pp. 13-17.

[5]David C. McClelland, "Measuring Motivation in Phantasy: The Achievement Motive," McClelland, Studies in Motivation, op. cit., pp. 401-14.

[6]Atkinson and Feather, op. cit., p. 23.

Self acceptance. This isolates other characteristics of the underachiever--negativism, hostility, hypercriticalness, defensiveness, and anxiousness.[1] These characteristics are closely tied to an unwillingness to accept limitations in themselves. Emanuel M. Berger, with a sample of fifty-six entering college freshmen, demonstrated that these underachievers (1) set extremely high standards for themselves, (2) denied wholeheartedness of efforts, (3) believed they should be able to achieve at a high level with little effort, and (4) were unwilling to risk being wrong, being disappointed, or doing poorly. Berger set out to prove, and succeeded in determining, that high ability college students who are willing to accept limitations achieve at a higher level.[2]

Need for approval. Still another characteristic of the underachiever is his penchant for being more easily influenced and an expanded dependence on others for approval and affiliation. Perhaps this is due to his lower level of self-esteem.[3] A chance for affiliation and approval by "having a beer with the boys" or spending a full week of pre-final

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[1]Raph, op. cit., p. 44; also Wellington, op. cit., p. 59.

[2]Berger, "Willingness to Accept Limitations," op. cit., pp. 14-23.

[3]Arthur H. Cohen, "Some Implications of Self-Esteem for Social Influence," Hovland and Janis, op. cit., p. 102.

time going through "hell week" for a Greek organization as one TSP student did recently. This may appear to be attractive and more immediately gratifying than any attention he would get for foregoing the socializing in favor of assiduous study. His state of mind is primarily dependent on what others think of him. Consequently the "My Time is Your Time" becomes his theme. His time schedule conforms not to his own wishes but to the wishes of his dominant peers.[1]

A very general amorphous sketch of the underachiever is, as stated earlier, somewhat awesome and certainly paradoxical. Following are descriptive of underachievers:

1. Negative relationship with father.
2. Tendency toward passivity.
3. Male tendency toward feminine identification.
4. Physical aggression toward animate objects produce feelings of guilt and anxiety.
5. Inability to verbally express negative feelings.
6. Feelings of inferiority and pessimism.
7. Higher incidence of asthma.
8. Fewer outside activities in high school.
9. Low self-concept, low level of aspiration, unhappiness.
10. Self-centered.

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[1]Pitcher and Blaushild, op. cit., pp. 29-30; Taylor, op. cit., pp. 76-82; David E. Clarke, "Measures of Achievement and Affiliation Motivation," Review of Educational Research, XLIII, 1, 41-49.

11. Dependent.
12. Lack of self-confidence.
13. Activities are mother-dominated.
14. Hesitant and unrealistic in goal-setting.
15. Short attention-span.
16. Critical of teachers.
17. Denial of whole-hearted effort.
18. More socially than academically-oriented (choose college for its social value).
19. Greater incidence in families of involvement in professions or business.
20. Unrealistic in choice of occupation.
21. Defensive.
22. Failure to see the relationship between school work and future goals.
23. Less interest in reading.
24. Withdraw from competition.
25. Low academic motivation.
26. Poor use of time or money.[1]

All of these characteristics are in addition to the previously stated propensity the underachiever may have for other-directedness, time-incompetence and low self-esteem and complacency. The unsophisticated may rush to "fit" the

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[1]Raph, op. cit., p. 20; Wellington, op. cit., pp. 22, 57, 67, 93; Taylor, op. cit., pp. 76-81; Sutherland, op. cit., pp. 388-89.

underachiever to each of the preceding characteristics--a futile exercise indeed. Rather, the prudent observer of students must be alert to the symptoms of underachievement for the purpose of aiding the student in gaining direction toward self-actualization.

PREDICTION OF COLLEGE SUCCESS USING NON-INTELLECTIVE VARIABLES

Need for Improvement

The prediction of underachievement in college is a vitally important goal both for the student and the educator. Those who have strived to improve methods for predicting of college success have been the most notorious "underachievers" of all. Baird humbly admits that "little more has been learned than that past academic performance predicts future academic performance."[1] Ludenia has observed that: "if marginal collegians are to be assisted in achieving academic success, different predictive methods must be used than those used with the average student."[2] Accurate prediction of first-semester GPA for students in the TSP has proven to be an especially elusive goal.

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[1]Leonard L. Baird, "Prediction of Accomplishment in College: A Study of Achievement," Journal of Counseling Psychology, XVI (1969), 246-253.

[2]Krista Ludenia, Academic Prediction and the Marginal Student (Bethesda, Md.: ERIC Document Reproduction Service, ED 045 040, 1970).

The traditional use of intellective predictor variables (achievement and aptitude tests) has added only a modest improvement to predictor formulas.[1]

Examples of Research

Educators recognize that there is more to prediction than history of achievement and aptitude. Merrill and Murphy compared first semester GPA's of students at the University of Utah who were predicted to earn 1.5 or below GPA's. Over 300 freshmen with such predictions were given the Edwards Personal Preference Schedule. Those students who failed to earn a 2.0 GPA or above were found to be significantly less achievement-oriented, more affiliative, and less dominant.[2]

Kunert found that in spite of limited value for accurate prediction, the California Personality Inventory (CPI) was helpful in identifying Ss (subjects) who would not do as well in college as they were expected to do.[3] Holland found the CPI to be a helpful predictive tool in predicting freshmen grades for a sample of high aptitude high school seniors,

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[1]David E. Lavin, The Prediction of Academic Performance (New York: Russell Sage Foundation, 1965), p. 21.

[2]Reed M. Merrill and Donald T. Murphy, "Personality Factors and Academic Achievement in College," Personnel and Guidance Journal, XXXV (1957), 518-522.

[3]Kenneth M. Kunert, Use of Profile Analysis in Predicting Academic Achievement (Bethesda, Md.: ERIC Document Reproduction Service, ED 045 710, 1970).

though the individual scales showed wide variation from one college to another.[1] Thus it would appear, as Kunert has suggested, that failure to consider the nature of the group may be responsible for the lack of success in precision of prediction.[2] That is, students who had qualified in the National Merit Scholarship Qualifying Test would undoubtedly require a different prediction formula than would a group such as the students in TSP, which includes such a wide range of abilities. Although all students placed in the TSP are thought to be underachievers at the time of their placement, they are undoubtedly underachievers for a variety of reasons. As stated earlier, some of them may be underachievers due to situational responses such as conflict with parents or having been labeled "underachiever" in high school. Reasons such as these would not necessarily follow them to the university setting, whereas entrenched behavior patterns such as time-incompetence or other-directedness might be expected to be a prevailing behavior pattern across situations--at home or at the university.

Not only may measured ability dictate selected variables to be used for prediction formulae, but different variables may be significant according to the sex of the student.

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[1] John L. Holland, "The Prediction of College Grades from the California Psychological Inventory and the Scholastic Aptitude Test," Journal of Educational Psychology, L, 4 (August, 1959), 138-142.

[2] Kunert, loc. cit.

Stroup[1] used a sample of 1938 freshmen (970 female, 968 male) students over a five-year period at the College of Wooster, Wooster, Ohio, to determine variables by sex which were the best predictors. In addition to the Math and Verbal subtests of the SAT, he found the Socialization, Achievement via Conformity and Flexibility, scales of the California Personality Inventory (CPI) to be effective (multiple R=.52) in predicting 2.0 GPA for women, whereas for men the CPI scales which were best predictors were Socialization, Flexibility, and Femininity (multiple R=.57).

Another study using the CPI for the purpose of determining the worth of scale scores as predictors was conducted at Albany State College. This research was conducted with high-risk students who, without remedial help, would be unlikely achievers. Again, significant relationships (.01 level) were found between improvement in reading (and subsequently, academic success) and Achievement via Independence, Achievement via Conformity, Intellectual Efficiency, Responsibility, Socialization, and CPI Well-Being. (No mention was made in this study of differences by sex.)[2]

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[1]Atlee L. Stroup, "The Prediction of Academic Performance from Personality and Aptitude Variables," The Journal of Experimental Education, XXXVIII, 3 (Spring, 1970), 83-86.

[2]Rosa Tift, A Preliminary Report on Predicting the Success of College Education Achievement Project Enrollers at Albany State College (Bethesda, Md.: ERIC Document Reproduction Service, ED 049 710, 1971).

Berger and Suther analyzed results of The Rotter Incomplete Sentence Blank administered to 353 freshmen students at Western Reserve University in an effort to ascertain criteria which were most predictive of probable academic success for freshmen students. Though correlations of grades and test scores were low, there seemed to be some basis for expecting better academic-performance from the better adjusted (as measured by the Rotter Incomplete Sentence Blank) students.[1]

When independence is perceived as self-sufficiency, autonomy, or self-direction as opposed to resistance to suggestion or other negative connotations, there appears to be a positive relationship between it and academic performance. George Weigund[2] compared two groups of conditionally admitted freshmen and found that those who were admitted contingent upon GPA, were goal oriented and self-directed. In a study of underachieving engineering students, Burgess found a higher dependency need (as determined by the TAT) than was revealed by their achieving counterparts.[3]

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[1]Irving L. Berger and Alvin R. Suther, "The Relationship of Emotional Adjustment and Intellectual Capacity to Academic Achievement of College Students," Mental Hygiene, XL (1956), 76.

[2]George Weigund, "Goal Aspiration and Academic Success," Personnel and Guidance Journal, XXXI (1953), 458-61.

[3]Elva Burgess, "Personality Factors of Over- and Under-achievers in Engineering," Journal of Educational Psychology, XLVII (1956), 89-99.

A measure of the student's appreciation for the present and cognizance of its value in terms of achieving goals may offer the possibility of worth as a predictor. In that goals (academic) do tie present to future, the student who can delay immediate gratification, and spurns impulsivity, is apt also to be the one who studies and prepares "today" for his academic evaluation tomorrow.[1] Indeed, time-competence and inner-directedness appear to have "lead parts" in the drama of school success. Lewin stated,

> How high a person will set his goal is deeply affected by the standards of the group to which he belongs, as well as by the standards of the group below and above him. Experiments with college students prove that, if the standards of a group are low, an individual will slacken his efforts and set his goals far below those he could reach. He will, on the other hand, raise his goals if the group standards are raised. In other words, both the ideals and the action of an individual depend upon the group to which he belongs and upon the goals and expectations of that group. That the problem of individual morale is to a large extent a socio-psychological problem of group goals and group standards is thus clear, even in those fields where the person seems to follow individual rather than group goals.[2]

Precision of prediction may indeed be improved with the use of a battery of tests measuring non-intellective variables, but admissions officers and statisticians must

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[1]Goodwin Watson, "Time Perspective and Morale," Civilian Morale, ed. Kurt Lewin (Boston: Houghton, Mifflin Co., 1942), p. 59.

[2]Ibid, p. 60.

remember that not only is the prediction for the student but that his morale and his attitude toward higher education may be jaded if he is required to take numerous tests for such a prediction. Dunham sought to improve prediction with the administration of a battery of six tests, yet failed to identify more than 50 percent of the total variance involved.[1]

College officials must continue to look for a simple means for identifying the prospective successful student without simultaneously alienating him from his desire, even before he begins his career in higher education. The administration of a single test appears to be the ideal. The POI is a relatively untried test for use as an academic predictor. However, its worth for other purposes has already been lauded.

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[1]Randall B. Dunham, "Achievement Motivation as Predictive of Academic Performance: A Multivariate Analysis," The Journal of Educational Research, LXVII, 2 (October, 1973), 70-72.

CHAPTER III

RESEARCH DESIGN AND METHODOLOGY

General Design

In the fall of 1973 there were 102 students enrolled in the Transitional Services Program at Drake University.

Participation in the TSP included enrollment in courses not to exceed fifteen credit hours, preferably ten to thirteen hours. Included in this program were Education 10 (speed reading) and Education 11 (study skills) both of which were required and offered one credit hour each on a credit-fail basis. English I (composition), a three credit hour course, was also required. Weekly conferences between the English teacher and each student were held for tutorial purposes. The remaining five to ten credit hours were courses usually required of freshmen students in each of their major fields of study.

Two full time counselors offer required, bi-weekly individual counseling to the forty students who have been assigned to each of them. One half-time counselor required the remaining twenty-two to attend weekly group counseling sessions.

At the beginning of the semester, a predicted GPA for each student was computed using a formula developed by ACT.

Also at that time, the Personal Orientation Inventory, a device designed to provide two measures, Inner-Directedness and Time-Competence, was administered to each student in TSP.

A post-test using the same instrument was administered at the end of the semester. Also at the end of the semester, actual GPA calculated on a scale with a maximum of four points (4.0) for each student was obtained. GPA was based only on courses offering credit hours and letter grades.

Pearson Produce-Moment correlation coefficients were calculated for the total group and for each sex between:

1. ACT-predicted GPA and actual GPA.
2. Pre-test scores on each major scale of the POI and actual GPA.
3. Post-test scores on each major scale of the POI and actual GPA.

In addition, a comparison of the pre-test POI major scale scores were made with actual GPA to see if there was a particular level of scoring on the pre-test below which students fail to earn a satisfactory (2.0) GPA.

Based on the information available, prediction equations were calculated for GPA using the POI pre-test results as predictors. The standard errors of prediction with these equations were compared with each other and with that for the ACT prediction.

The research was conducted at Drake University during the fall semester beginning August 27, 1973. Drake

University is a private institution located in Des Moines, Iowa. Approximately 5000 students are enrolled in its eight colleges and schools. Founded in 1881, it offers degrees in business administration, education, fine arts, liberal arts, pharmacy and journalism and advanced degrees in five colleges.

Population and Sample

Students were those whose qualifications for admission to Drake University were unsatisfactory on the basis of regular requirements but were admitted to a special program to determine if they could succeed in earning the 2.0 GPA necessary for admission.

The sample consisted of 102 such students who were currently enrolled in the program. Fifty-eight men and forty-four women with ages between 17 and 20 years of age made up the 1973 Fall semester group. The range of the ACT composite scores was 11 to 28 for men and 10 to 20 for women. The ACT norm group has a mean of 20 and a standard deviation of 5.

Data and Instrumentation

Data were compiled from three sources--the Personal Orientation Inventory, predicted GPA and actual GPA.

Personal Orientation Inventory. The Personal Orientation Inventory is a standardized "measure of self-actualization" with major scaled scores of Inner-Directedness and Time-Competence plus ten sub-scales. The ten sub-scales

contain nine to 32 items taken mostly from the Inner-Directedness scale. (For a description of these, see page 9.) The inventory consists of 150 two-choice comparative value and behavior judgments. The Inner-Directedness scale is derived from 127 items and the Time-Competence scale from 23 items. Norms for this test were based on beginning college freshmen from western and mid-western liberal arts colleges.

Reliability of the Personal Orientation Inventory. Test-retest reliability coefficients have been obtained for Personal Orientation Inventory scales based on a sample of 48 undergraduate college students. The Personal Orientation Inventory was administered twice, a week apart, to the sample with the instructions that it was part of the experiment to take the Inventory twice. Reliability coefficients for the major scales of Time-Competence and Inner-Directedness are .71 and .77 respectively.[1]

Validity of the Personal Orientation Inventory. Shostrom, Fox and McClain have demonstrated that the Personal Orientation Inventory differentiates between groups of subjects nominated by clinicians as actualizing and

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[1]E. L. Shostrom, Manual, Personal Orientation Inventory (San Diego: Educational and Industrial Testing Service, 1966), p. 32.

non-actualizing adults.[1]

LeMay and Damm, in a study comparing achieving (2.0 GPA) second term Oregon State University freshmen with underachieving (less than 2.0 GPA) second term freshmen revealed that the Personal Orientation Inventory differentiated between the criterion groups at the .05 and .01 confidence levels.[2]

The data consisted of two standard scores for each individual on each administration of the test. These were in the form of scores for each major scale.

ANALYSIS OF DATA

The analysis was conducted through the process of correlation and regression. Sets of variables to be considered for correlation were as follows:

1. ACT-predicted GPA vs. actual GPA.

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[1]E. L. Shostrom and R. R. Knapp, "The Relationship of the Measure of Self-actualization (POI) to a Measure of Pathology (MMPI) and to Therapeutic Growth," American Journal of Psychotherapy, XX (1966), 193-202; J. Fox, R. R. Knapp and W. B. Michael, "Assessment of Self-actualization of Psychiatric Patients, Validity of the POI," Educational and Psychological Measurement, XXVIII (1968), 565-569; E. W. McClain, "Personal Growth for Teachers in Training Through Self Study," Journal of Teacher Education, XXI (1970), 372-377.

[2]Morris L. LeMay and Vernon J. Damm, "The Personal Orientation Inventory as a Measure of Self-actualization in Underachievers," Measurement and Evaluation in Guidance, I, 2 (Summer, 1968), 108-114.

2. Pre-test scores of the POI Time-Competence scale vs. actual GPA.
3. Pre-test scores of the POI Inner-Directedness scale vs. actual GPA.
4. Post-test scores of the POI Time-Competence scale vs. actual GPA.
5. Post-test scores of the POI Inner-Directedness scale vs. actual GPA.

Using each of these pairs of scores, scatter diagrams were constructed. It was anticipated that the relationships would be linear; the scatter diagrams would either verify or refute this assumption.

If linearity existed, the Pearson Product-Moment correlation coefficient would be the appropriate statistic to determine relationships.

The formula to calculate this statistic is as follows:

$$r_{xy} = \frac{N\Sigma XY - \Sigma X \Sigma Y}{\sqrt{\left[N\Sigma X^2 - (\Sigma X)^2\right]\left[N\Sigma Y^2 - (\Sigma Y)^2\right]}}$$

For prediction purposes, the variable to be predicted was actual GPA. Those means which might be used for predicting this variable were ACT-predicted GPA and pre-test scores of each major scale on the POI. If the correlations of these possible predictor variables with actual GPA were significantly

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[1] L. G. Gotkin and L. S. Goldstein, Descriptive Statistics, Vol. 2 (New York: John Wiley & Sons, Inc., 1965), p. 107.

different from zero, a prediction equation was calculated for actual GPA for each of the variables which showed such significant correlation.

Slope and intercept values were determined using the following formulas:

$$b = \frac{N\Sigma XY - (\Sigma X)(\Sigma Y)}{N\Sigma X^2 - (\Sigma X)^2}$$

$$a = \bar{Y} - b\bar{X}$$

The regression formula used was: $\tilde{Y} = a + bX$ [1]

For each predictor variable (ACT-predicted GPA and pre-test scores of each major scale on the POI) the standard error of prediction of GPA was determined. The standard error of prediction was also determined for the ACT-predicted GPA.

Unless the error of prediction using POI major scale pre-tests as predictors is smaller than either the ACT-prediction method error of prediction or the standard deviation of the actual GPA's, no improvement in prediction method will have been found.

The eventual purpose, then, was to discover the proportion of improvement of either POI variable as a predictor of GPA over the standard deviation of the actual GPA or the standard error of ACT-predicted GPA. On the basis of these comparisons, determination was made as to which is the best predictor for this particular sample.

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[1] Gotkin and Goldstein, op. cit., p. 179.

CHAPTER IV

FINDINGS

At the beginning of the 1973 fall semester at Drake University, 97 students in the Transitional Services Program were administered pre-tests of the Personal Orientation Inventory. At the end of the semester, 83 students took the post-test.

The ACT-predicted GPA's and first semester actual GPA's were compiled and used for the analyses. The problem of the study was to determine whether the use of the POI as a predictor of first semester grades would be more accurate than predictions based on the ACT prediction method. Pearson Product-Moment correlation coefficients were used to determine relationships between ACT-predicted and actual GPA, as well as relationships of POI major scale and subscale scores with actual GPA.

Table I shows the Pearson Product-Moment correlation coefficients for ACT-predicted and actual GPA's for the 56 males, 42 females, as well as the entire 97 students. In terms of the relationships based upon sex, only that for males was statistically significant ($r=.452$). It was also found that the correlation between ACT-predicted GPA and actual GPA was statistically significant for the entire

group (r=.317). In every case, the correlations were positive. The significant correlation for the total group may well be a result of the relationship for males since the correlation of these characteristics for females was essentially negligible.

TABLE I

CORRELATIONS BY SEX AND TOTAL GROUP BETWEEN ACT-PREDICTED AND ACTUAL GPA'S

	Males(N=56)	Females(N=42)	Total(N=98)
$\bar{X}$	1.469	1.531	1.496
SD_x	.21733	.15087	.19331
$\bar{Y}$	2.369	2.130	2.266
SD_y	.79775	.59016	.72261
r	.45170**	.09415	.31686**
$SE_{pred.}$	.7117	.5873	.6854

$\bar{X}$ = ACT-predicted GPA $\bar{Y}$ = Actual GPA
$SE_{pred.}$ = standard error of prediction
** = ($p < .01$)

The first null hypothesis concerning the POI is as follows: The relationship between the POI Time-Competence major scale pre-test scores and actual GPA is not greater than the relationship between the ACT-predicted and actual GPA. The findings concerning POI Time-Competence and its relationship to actual GPA are shown in Table II. No statistically

significant relationship between POI Time-Competence pre-test scale scores and actual GPA was found. Correlations for males (r= -.18125) and for the total group (r= -.14033) were negative, whereas for females the correlations were positive (r=.05), though slight in every case. The magnitude of these correlation coefficients is less than the magnitude of the correlation coefficients using ACT as a predictor, as can be seen by comparing the values of r in Table II with corresponding values of r in Table I. Thus this null hypothesis was retained.

TABLE II

CORRELATIONS BY SEX AND TOTAL GROUP BETWEEN POI TIME-COMPETENCE PRE-TEST SCALE SCORES AND ACTUAL FIRST-SEMESTER GRADES

	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	15.981	15.846	15.924
SD_x	2.92429	2.12180	2.60276
$\bar{Y}$	2.351	2.139	2.261
SD_y	.81377	.59298	.73239
r	-.18135	-.05308	-.14033
$SE_{pred.}$	.8003	.5921	.7251

$\bar{X}$ = POI Time-Competence pre-test scale score
$\bar{Y}$ = actual GPA

The second null hypothesis concerning the POI is as follows: The relationship between the POI Inner-Directedness major scale pre-test scores and actual GPA is not greater than the relationship between the ACT-predicted GPA and actual GPA.

TABLE III

CORRELATIONS BY SEX AND TOTAL GROUP BETWEEN POI INNER-DIRECTEDNESS SCALE PRE-TEST SCORES AND ACTUAL FIRST-SEMESTER GPA'S

	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	79.189	79.000	79.109
SD_x	9.86653	10.64746	10.14776
$\bar{Y}$	2.351	2.139	2.261
SD_y	.81377	.59298	.73239
r	.04673	-.15197	-.02373
$SE_{pred.}$	.8129	.5861	.7322

$\bar{X}$ = POI Inner-Directedness scale pre-test score
$\bar{Y}$ = Actual GPA

The findings concerning POI Inner-Directedness and its relationship to actual GPA are shown in Table III. No statistically significant relationship between POI Inner-Directedness pre-test scale scores and actual GPA was found. Correlation for males (r=.04673) was positive, whereas for females (r= -.15197) and for the total group (r= -.02373) correlations were negative, though slight in every case. The

magnitude of the correlation coefficients for males and for the total group is less than the magnitude of the correlation coefficients for males and for the total group using ACT as a predictor, as can be seen by comparing the values of r in Table III with corresponding values of r in Table I. For females, the magnitude of these correlation coefficients is greater (though not statistically significant) than the correlation coefficients using ACT as a predictor, as can be seen by comparing the value of r in Table III with the corresponding value of r in Table I. Thus, this null hypothesis was retained.

Since the Inner-Directedness sub-scale data were available, it seemed reasonable to investigate whether or not any statistically significant relationships existed between subscale scores and first-semester GPA.

The findings concerning the relationships between each POI Inner-Directedness subscale and actual GPA are shown in Table IV. No significant relationships were found between any of the POI Inner-Directedness sub-scale pre-test scores and actual GPA for the total group. However, Table IV does indicate two significant relationships between POI subscales and actual GPA, one for females and one for males. Self-Regard for females (r= -.33354) was significant at the .05 level. The negative relationship for females indicates that those with higher Self-Regard tend to get poorer grades.

TABLE IV

CORRELATIONS BY SEX AND TOTAL BETWEEN POI INNER-DIRECTEDNESS SUB-SCALES PRE-TEST AND ACTUAL GPA'S

TEST - SELF-ACTUALIZING VALUE (sub-scale)			
	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	19.377	19.410	19.391
S_x	2.91697	2.38104	2.68883
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	.15852	-.18507	.05291
$SE_{pred.}$	.8035	.5827	.7314

$\bar{X}$ = Self-Actualizing Value Scores $\bar{Y}$ = Actual GPA

TEST - EXISTENTIALITY (sub-scale)			
	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	18.830	17.538	18.283
S_x	3.93082	4.57019	4.23830
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	.13334	-.06159	.07789
$SE_{pred.}$	.8065	.5919	.7302

$\bar{X}$ = Existentiality Scores $\bar{Y}$ = Actual GPA

TABLE IV (Continued)

TEST - FEELING REACTIVITY (sub-scale)			
	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	15.151	15.000	15.087
S_x	2.49149	3.22817	2.81148
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	.02752	-.17074	-.04696
$SE_{pred.}$	.8135	.5843	.7316

$\bar{X}$ = Feeling Reactivity Scores $\bar{Y}$ = Actual GPA

TEST - SPONTANEITY (sub-scale)			
	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	11.981	11.692	11.859
S_x	2.67819	2.50425	2.59578
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	-.01976	-.12822	-.04680
$SE_{pred.}$	.8136	.5881	.7316

$\bar{X}$ = Spontaneity Scores $\bar{Y}$ = Actual GPA

TABLE IV (Continued)

TEST - SELF-REGARD (sub-scale)

	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	12.264	11.821	12.076
S_x	2.45067	1.99831	2.26892
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	-.08270	-.33354*	-.1417
$SE_{pred.}$	.8109	.5590	.7250

$\bar{X}$ = Self-Regard Scores $\bar{Y}$ = Actual GPA *p = < .05

TEST - SELF-ACCEPTANCE (sub-scale)

	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	14.019	14.103	14.054
S_x	4.10670	3.12709	3.70436
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	-.03471	.08764	-.00103
$SE_{pred.}$	.8133	.5907	.73239

$\bar{X}$ = Self-Acceptance Scores $\bar{Y}$ = Actual GPA

TABLE IV (Continued)

TEST - NATURE OF MAN, CONSTRUCTIVE (sub-scale)

	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	11.151	11.308	11.217
S_x	2.06058	1.83753	1.96019
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	.18970	-.16313	.06918
$SE_{pred.}$	.7990	.5850	.7306

$\bar{X}$ = Nature of Man, Constructive $\bar{Y}$ = Actual GPA

TEST - SYNERGY (sub-scale)

	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	6.321	6.256	6.293
S_x	1.39744	1.11728	1.27992
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	.26855*	-.18657	.13470
$SE_{pred.}$	.7839	.5826	.7257

$\bar{X}$ = Synergy score $\bar{Y}$ = Actual GPA *$p < .05$

TABLE IV (Continued)

TEST - ACCEPTANCE OF AGGRESSION (sub-scale)

	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	15.226	14.769	15.033
S_x	2.89988	3.03888	2.95181
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	.01162	-.11977	-.02335
$SE_{pred.}$	.8137	.5887	.7322

$\bar{X}$ = Acceptance of Aggression Score $\bar{Y}$ = Actual GPA

TEST - CAPACITY FOR INTIMATE CONTACT (sub-scale)

	Males(N=53)	Females(N=39)	Total(N=92)
$\bar{X}$	17.340	16.308	16.902
S_x	3.01881	3.31785	3.17289
$\bar{Y}$	2.351	2.139	2.261
S_y	.81377	.59298	.73239
r	.17245	-.15549	.07249
$SE_{pred.}$	.8016	.5858	.7305

$\bar{X}$ = Capacity for Intimate Contact Score $\bar{Y}$ = Actual GPA

The second sub-scale which had a significant relationship with actual GPA was Synergy. For males this relationship (r=.26855) was significant at the .05 level. The positive correlation indicates that those males who score higher on Synergy tend to get higher grades.

The third null hypothesis is as follows: There is no significant relationship between post-test scores of the POI Time-Competence scale and actual GPA.

TABLE V

CORRELATIONS BY SEX AND TOTAL GROUP BETWEEN POI TIME-COMPETENCE SCALE POST-TEST SCORES AND ACTUAL GPA'S

	Males(N=48)	Females(N=35)	Total(N=83)
$\bar{X}$	16.146	16.114	16.133
S_x	3.30048	2.66537	3.03143
$\bar{Y}$	2.477	2.167	2.346
S_y	.69099	.56691	.65632
r	-.22727	.19764	-.08587
$SE_{pred.}$	.6729	.5557	.6539

The findings as shown in Table V indicate no significant relationship between POI Time-Competence post-test scores and actual GPA for males (r= -.22727), for females (r=.19764), nor for the total group (r= -.08587). The relationships for

males and for the total group were negative whereas for females a positive relationship existed.

The fourth null hypothesis is as follows: There is no significant relationship between post-test scores of the POI Inner-Directedness scale and actual GPA.

TABLE VI

CORRELATIONS BY SEX AND TOTAL GROUP BETWEEN POI INNER-DIRECTEDNESS SCALE POST-TEST SCORES AND ACTUAL GPA'S

	Males(N=48)	Females(N=35)	Total(N=83)
$\bar{X}$	83.458	80.629	82.265
S_x	10.60902	9.73800	10.28625
$\bar{Y}$	2.477	2.167	2.346
S_y	.69099	.56691	.65632
r	-.11650	-.07355	-.06530
$SE_{pred.}$	.6864	.5638	.6549

$\bar{X}$ = Inner-Directedness post-test scores $\bar{Y}$ = Actual GPA

The findings as shown in Table VI indicate no significant relationships between Inner-Directedness post-test scores and actual GPA for males (r= -.11650), females (r= -.07355), nor for the total group (r= -.06530). All relationships were slight and negative.

SUMMARY OF FINDINGS

Compared to the ACT method of predicting first semester GPA for males (r=.45170) neither of the POI major scales or any of the subscales showed any improvement. However, in terms of prediction of first semester grades for females, the ACT-predicted GPA's had such minimal relationships with actual GPA (r=.09415) that one of the two major scales (Inner-Directedness) and all but two of the sub-scales (Existentiality and Self-Acceptance) were more highly correlated with actual first-semester GPA. However, only one sub-scale (Self-Regard) revealed a statistically significant relationship ($p < .05$) with actual GPA (r= -.33354). For females in this sample, a better predictor of first-semester grades was found.

Of the 45 correlations run, one correlation reached significance for males and one for females. The significant correlation found for males was Synergy vs. GPA. However, the relationship was not as great as the ACT prediction method and actual GPA. Thus, this sub-scale could not be considered a better predictor. However, in terms of first semester prediction for females, one sub-scale, Self-Regard, was significantly correlated with actual GPA. Since the correlation between the ACT-prediction method GPA and actual GPA was not significant, the sub-scale, Self-Regard, as a predictor of first semester GPA was an improvement over the ACT-prediction method.

semester GPA was an improvement over the ACT-prediction method.

No statistically significant relationship was found to exist between POI major scale post-test scores and actual GPA, thus ruling out the possibility that achievement (2.0 GPA) is related to self-actualization as measured by the POI.

CHAPTER V

SUMMARY, DISCUSSION, AND CONCLUSIONS

SUMMARY

The Problem

College placement officers cannot predict with any degree of certainty whether or not students in the Transitional Services Program can earn a 2.0 GPA the first semester. They want to avoid placing students in another situation in which they are apt to fail. To avoid such student failure, college placement officers need additional standardized indices for prediction.

Pitcher and Blaushild believe a relationship exists between time-competence and/or inner-directedness and a student's predisposition for academic success of failure.[1] In spite of this relationship, the currently-used ACT prediction method does not use the Personal Orientation Inventory scale scores of Time-Competence and/or Inner-Directedness as indices of academic success.

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[1]Robert W. Pitcher and B. Blaushild, Why College Students Fail (New York: Funk and Wagnalls, 1970), pp. 13, 38-39.

This investigation was made to determine whether or not there was a statistically significant relationship between Time-competence and/or Inner-directedness scale pre-test scores of the POI and actual GPA. If such a relationship exists, its magnitude would be compared to the magnitude of relationship between ACT-predicted GPA and actual GPA to see which was the better predictor. The problem was, then, to determine whether POI scale pre-test scores could be used more accurately as predictors of first semester GPA's than the ACT-prediction method.

A second problem was to investigate the relationship between Time-Competence and/or Inner-Directedness scale post-test scores of the POI with actual GPA to determine the existence and degree of relatedness between the POI major scale scores (a standardized measure of self-actualization) and actual GPA's.

Design and Methodology

The sample consisted of the 102 TSP students in the fall of 1973. Ninety-seven of these students took the pre-test of the POI and 83 of them also took the post-test. A Pearson Product-Moment correlation was calculated between ACT-predicted and actual GPA. Correlations were also calculated between: POI Time-Competence scale pre-test scores and actual GPA's, POI Inner-Directedness scale pre-test scores and actual GPA's, and between each of the ten Inner-Directedness sub-scale

pre-test scores and actual GPA's. Comparison was then made of the magnitude of correlations between each POI scale and actual GPA's, sub-scale scores and actual GPA's, and between ACT-predicted GPA's and actual GPA's to determine which correlation had the greatest magnitude, and therefore was the best predictor of first semester GPA.

Findings

Two POI sub-scales were found to have a statistically significant relationship ($p < .05$) to actual GPA in this study. One was the relationship between the Inner-Directedness sub-scale Synergy pre-test and actual GPA for males ($r=.26855$). The other was the Inner-Directedness sub-scale Self-Regard pre-test and actual GPA for females ($r= -.33354$). The magnitude of each of the two POI sub-scale correlations with actual GPA was compared to the magnitude of the correlation between the ACT-predicted GPA and actual GPA. Both of these POI Inner-Directedness sub-scale pre-test variables are discussed below separately and the results attained are compared to results attained with the ACT-prediction procedure variable.

Synergy. Synergy, as described by Shostrum, is the ability to see the opposites of life as meaningfully related. The correlation between the Synergy sub-scale pre-test and actual GPA was, as stated, statistically significant ($p < .05$). In comparison to the statistically significant relationship ($p < .01$) between the ACT-prediction method variable and actual

GPA (r=.45170), however, the Synergy subscale was not as good a predictor. Thus use of the Synergy sub-scale offered no improvement of prediction of first-semester GPA for males, when compared to the current process.

Self-Regard. As described earlier, self-regard is the ability to like one's self because of one's strength as a person--the characteristic of having "high self worth." Correlation between the Self-Regard sub-scale pre-test and actual GPA was statistically significant for females in this sample (r= -.33354). The data revealed that as Self-Regard was lower for females, actual GPA was higher. The correlation for females between the ACT-predicted GPA and actual GPA was not statistically significant (r=.09415). Thus Self-Regard was found to be a better predictor of first semester GPA for females.

DISCUSSION

Synergy, an appreciation for meaningful relatedness of opposites, was found to be positively and significantly related to actual GPA's for males in the sample. A requirement for the ability to see the meaningful relationship in life's opposites may be an "objective approach" to life. Objectivity and an unemotional "that's-life-so-accept-it" attitude is societally nurtured in boys as they grow up. It may be that males who deal with the everyday problems in life in an objective manner may also see a meaningful relationship

between assiduous academic effort and good grades.

Self-Regard, the ability to highly regard self, was found to be negatively and significantly related to actual GPA's for females in the sample. Perhaps the reason motivation (in this case, to do well in TSP and ultimately at Drake University) was not diminished by a lower Self-Regard was actually due to the placement in TSP. As Branden has stated, the force behind motivation often stems from a fear of failure or from a position of defense in the absence of sufficient offense or confidence.[1] This may have been the case for women in this study. The negative relationship between Self-Regard and actual GPA may reflect their having performed well (2.0 GPA or better), from a position of fear of academic failure rather than from a cognitive position of academic strength. Admittedly, this possibility would require further research of the reasons for motivation and its consequences.

If a woman in this sample had been conforming to society's expectation of her to achieve in school, she may then have already made the effort to do well in school before arriving at Drake University, yet failed to achieve. (Hence, the placement in TSP.) Following this failure to achieve, a subsequent downward revision of her Self-Regard could be expected to have ensued. Left to her own academic

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[1]Nathaniel Branden, The Psychology of Self-Esteem (Los Angeles: Nash Publishing Company, 1970), pp. 146-47.

devices, the female student in this study might have been expected to continue to do poorly or even give up. However, doubt of one's academic ability, self-discipline for study, and inadequate study skills may have produced a concomitant recognition of a need for outside help. For those in TSP, this assistance could come from the special help offered in the speed reading and study skills classes, the tutorial approach in the special English I classes, and the supportive and motivational aid offered by the TSP counselors. Thus, in spite of a feeling of low self-worth, she was able to earn an acceptable (2.0) GPA.

Relationship of Self-Actualization and Grades

A number of questions can be raised concerning the results of this study. If academic achievement can be assumed to be a behavior of a self-actualizing person, then it would seem that a statistically significant relationship between GPA and POI scale scores, either at the beginning and/or the end of the semester, should have existed for TSP students. But no such relationship existed. Again, if the above assumption were valid then the absence of statistically significant relationships between pre-test measures of self-actualization and actual GPA perhaps should have been anticipated at the beginning of the semester for the underachiever. Yet the absence of a significant relationship continued, as evidenced by post-test results. Despite the negligible relationship between TSP students' Time-Competence and/or

Inner-Directedness pre-test scores and their actual GPA's, their academic behaviors were such that, for the most part, they earned GPA's high enough for admittance. It would thus seem logical to expect a significant relationship to exist at the end of the first term. This did not occur.

The possibility may be that students in TSP, in spite of their first semester academic achievement of a 2.0 GPA, may have been responding only to fear of failure, modeling the behavior of achieving peers for the first semester, or otherwise have been "good children" just long enough to be admitted to the University. In spite of this "academic behavior," if any of these possibilities were true, there may have been failure to internalize the behaviors required of an achieving (and self-actualizing) student. Thus, no significant relationship exists between self-actualization (Time-Competence and/or Inner-Directedness) and actual GPA, possibly because the student had not really been "his own person" during the first semester but was only playing the role of one who is self-actualizing.

CONCLUSIONS

From the data, the following conclusions were drawn:

1. The Self-Regard sub-scale is a potentially better predictor of TSP female academic achievement than is the ACT-prediction procedure.

2. The POI major scale scores are without value as

predictors of first-semester grades for students in TSP.

3. There is no relationship between a level of self-actualization at the end of a semester of college work and grades earned during that semester.

4. No currently-used prediction devices can adequately predict collegiate academic success for both males and females who are marginal students.

5. For males, the ACT-prediction method remains the best available predictor of first semester grades in the TSP.

Implications for Further Research

There was no attempt to determine the extent to which attitude toward being in TSP prior to or during the semester affected the respective pre-test and post-test scores; nor the extent to which pride or disappointment in attending this particular University affected POI scores or actual GPA; nor was an attempt made to determine the extent to which attitudinal social and emotional growth or regression at the end of the semesters compared to the beginning affected the relationships between POI test scores and actual GPA. A copious list of similar considerations for research could be investigated.

In addition to questioning the worth of the POI as a predictor of first semester GPA and as a measure of self-actualization for this sample, those people who design and implement plans for the continued and long-term improvement

of TSP may need to ask themselves some different questions. One question may concern the value of TSP as a vehicle for long-term academic behavior-change.

As Astin suggested, knowledge of many variables concerning the student adds to the accuracy in prediction of academic achievement.[1] Though the POI scale scores did not prove to be related to first-semester grades, measures of other non-intellective variables should be investigated for possible relatedness. Those found to be strongly related to GPA could be used for refinement of prediction in a multiple-variable predictor, such as the ACT-prediction method. Examples of standardized measures of non-intellective variables, such as the California Personality Inventory and the Edwards Personal Preference Schedule, which have had relatively high correlation with academic success in other types of student groups, could be tested for predictive validity in the TSP.

In view of the fact that knowledge of past achievement as a "best predictor" is still far from perfect, some additional approaches to prediction seem to be indicated. The most difficult assignment appears to be to take a fresh look at the entire picture of prediction. To accomplish this, there is the need to recognize those variables which come

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[1]Alexander Astin, Predicting Academic Performance in College (New York, The Free Press, 1971), p. 20.

closer to identifying the underlying causes of and contributions to academic success. Perhaps there is a need to look at the classroom with its teaching materials and methods. The myriad rewards for learning may not be offered early enough in the student's life or may not be sufficiently evident to the student to motivate him to achieve academically. Perhaps changed societal emphases on reasons for academic achievement and an improved academic environment will stimulate students to improve their academic performance.

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